

261 - IDENTIFICATION AND LISTING OF HAZARDOUS WASTE1

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**261 - IDENTIFICATION AND LISTING OF
HAZARDOUS WASTE**

Subpart A - General

261.1 Purpose and Scope

(a) This part identifies those solid wastes which are subject to regulation as hazardous wastes under

Regulations R.61-79.124, .262 through .266, .268, .270, and 40 CFR 271, and which are subject to the notification requirements of the South Carolina Hazardous Waste Management Act 44-56-120 and section 3010 of RCRA. In this part: (11/90; 12/92)

(1) Subpart A defines the terms "solid waste" and "hazardous waste," identifies those wastes which are

excluded from regulation under R.61-79.262 through 266, 268, and R.61-270, and establishes special management requirements for hazardous waste produced by conditionally exempt small quantity generators and hazardous waste which is recycled.

(2) Subpart B sets forth the criteria used by the Department to identify characteristics of hazardous waste and to list particular hazardous wastes.

(3) Subpart C identifies characteristics of hazardous waste.

(4) Subpart D lists particular hazardous wastes.

(b)(1) The definition of solid waste contained in this part applies only to wastes that also are hazardous for purposes of the regulations implementing the South Carolina Hazardous Waste Management Act 44-56-10 et seq and Subtitle C of RCRA. For example, it does not apply to materials (such as nonhazardous scrap, paper, textiles, or rubber) that are not otherwise hazardous wastes and that are recycled (12/92; 12/93).

(2) This part identifies only some of the materials which are solid wastes and hazardous wastes under SCHWMA 44-56-10 et seq. and sections 3007, 3013, and 7003 of RCRA. A material which is not defined as a solid waste in this part, or is not a hazardous waste identified or listed in this part, is still a solid waste and a hazardous waste for purposes of these sections if:

(i) In the case of SCHWMA 44-56-90 and sections 3007 and 3013 of RCRA, the Department has reason to believe that the material may be a solid waste within the meaning of section 44-56-20(6) of the S.C. Code of Laws of 1976, as amended or a solid waste within the meaning of section 1004(27) of RCRA and a hazardous waste within the meaning of section 1004(5) of RCRA; or (11/90, 11/99)

(ii) In the case of SCHWMA 44-56-50 or RCRA section 7003, the statutory elements are established.

(c) For the purposes of sections 261.2 and 261.6:

(1) A "spent material" is any material that has been used and as a result of contamination can no longer serve the purpose for which it was produced without processing;

(2) "Sludge" has the same meaning used in 260.10;

(3) A "by-product" is a material that is not one of the primary products of a production process and is not solely or separately produced by the production process. Examples are process residues such as slags or distillation column bottoms. The term does not include a co-product that is produced for the general public's use and is ordinarily used in the form it is produced by the process.

(4) A material is "reclaimed" if it is processed to recover a usable product, or if it is regenerated. Examples are recovery of lead values from spent batteries and regeneration of spent solvents.

(5) A material is "used or reused" if it is either:

(i) Employed as an ingredient (including use as an intermediate) in an industrial process to make a product (for example, distillation bottoms from one process used as feedstock in another process). However, a material will not satisfy this condition if distinct components of the material are recovered as separate end products (as when metals are recovered from metal-containing secondary materials); or

(ii) Employed in a particular function or application as an effective substitute for a commercial product (for example, spent pickle liquor used as phosphorous precipitant and sludge conditioner in wastewater treatment).

(6) "Scrap metal" is bits and pieces of metal parts (e.g., bars, turnings, rods, sheets, wire) or metal pieces that may be combined together with bolts or soldering (e.g., radiators, scrap automobiles, railroad box cars), which when worn or superfluous can be recycled.

(7) A material is "recycled" if it is used, reused, or reclaimed.

(8) A material is "accumulated speculatively" if it is accumulated before being recycled. A material is not accumulated speculatively, however, if the person accumulating it can show that the material is potentially recyclable and has a feasible means of being recycled; and that - during the calendar year (commencing on January 1) - the amount of material that is recycled, or transferred to a different site for recycling, equals at least 75 percent by weight or volume of the amount of that material accumulated at the beginning of the period. In calculating the percentage of turnover, the 75 percent requirement is to be applied to each material of the same type (e.g., slags from a single smelting process) that is recycled in the same way (i.e., from which the same material is recovered or that is used in the same way). Materials accumulating in units that would be exempt from regulation under section 261.4(c) are not to be included in making the calculation. (Materials that are already defined as solid wastes also are not to be included in making the calculation.) Materials are no longer in this category once they are removed from accumulation for recycling, however.

(9) "Excluded scrap metal" is processed scrap metal, unprocessed home scrap metal, and unprocessed prompt scrap metal. (9/98)

(10) "Processed scrap metal" is scrap metal which has been manually or physically altered to either separate it into distinct materials to enhance economic value or to improve the handling of materials. Processed scrap metal includes, but is not limited to scrap metal which has been baled, shredded, sheared, chopped, crushed, flattened, cut, melted, or separated by metal type (i.e., sorted), and, fines, drosses and related materials which have been agglomerated. (Note: shredded circuit boards being sent for recycling are not considered processed scrap metal. They are covered

under the exclusion from the definition of solid waste for shredded circuit boards being recycled (261.4(a)(13)). (9/98)

(11) "Home scrap metal" is scrap metal as generated by steel mills, foundries, and refineries such as turnings, cuttings, punchings, and borings. (9/98)

(2) "Prompt scrap metal" is scrap metal as generated by the metal working/fabrication industries and includes such scrap metal as turnings, cuttings, punchings, and borings. Prompt scrap is also known as industrial or new scrap metal. (9/98)

(d) [Reserved 6/06]

261.2 Definition of solid waste

(a)(1) A solid waste is any discarded material that is not excluded by section 261.4(a) or that is not excluded by variance granted under 260.30 and 260.31.

(2) A discarded material is any material which is (12/92):

(i) Abandoned, as explained in paragraph (b) of this section; or

(ii) Recycled, as explained in paragraph (c) of this section; or

(iii) Considered inherently waste-like, as explained in paragraph (d) of this section; or (9/98)

(iv) A "military munition" identified as a solid waste in 266.202. (9/98)

(b) Materials are solid waste if they are abandoned by being:

(1) Disposed of; or

(2) Burned or incinerated; or

(3) Accumulated, stored, or treated (but not recycled) before or in lieu of being abandoned by being disposed of, burned, or incinerated.

(c) Materials are solid wastes if they are recycled or accumulated, stored, or treated before recycling - as specified in paragraphs (c)(1) through (4) of this section.

(1) Used in a manner constituting disposal.

(i) Materials noted with an "x" in Column 1 of Table 1 are solid wastes when they are:

(A) Applied to or placed on the land in a manner that constitutes disposal; or

(B) Used to produce products that are applied to or placed on the land or are otherwise contained in products that are applied to or placed on the land (in which cases the product itself remains a solid waste).

(ii) However, commercial chemical products listed in section 261.33 are not solid wastes if they are applied to the land and that is their ordinary manner of use.

(2) Burning for energy recovery.

(i) Materials noted with an "x" in column 2 of Table 1 are solid wastes when they are:

(A) Burned to recover energy;

(B) Used to produce a fuel or are otherwise contained in fuels (in which cases the fuel itself remains a solid waste).

(ii) However, commercial chemical products listed in section 261.33 are not solid wastes if they are themselves fuels.

(3) Reclaimed. Materials noted with an "x" in column 3 of Table 1 are solid wastes when reclaimed. Materials noted with a "---" in column 3 of Table 1 are not solid wastes when reclaimed. (11/99, 8/00, 6/03).

(4) Accumulated speculatively. Materials noted with an "x" in column 4 of Table 1 are solid wastes when accumulated speculatively.

261.2 Table 1 Summary of definitions of Solid Waste				
[Note: The terms "spent materials," "sludges," "by-products," and "scrap metal" are defined in 261.1.] (11/99)	Use Constituting Disposal 261.2(c)(1) (1)	Energy Recovery/ Fuel 261.2(c)(2) (2)	Reclamation 261.2(c)(3) (8/00)(except as provided in 261.4(a)(17) for mineral processing secondary metals) (3)	Speculative Accumulation 261.2(c)(4) (4)
Spent Materials	(x)	(x)	(x)	(x)
Sludges (listed in Section 261.31 or .32)	(x)	(x)	(x)	(x)
Sludges exhibiting a characteristic of hazardous waste	(x)	(x)	---	(x)
By-products (listed in Section 261.31 or .32)	(x)	(x)	(x)	(x)
By-products exhibiting a characteristic of hazardous waste	(x)	(x)	---	(x)
Commercial chemical products listed in Section 261.33	(x)	(x)	---	---
Scrap metal other than excluded scrap metal (see 261.1(c)(9))	(x)	(x)	(x)	(x)

(d) Inherently waste-like materials. The following materials are solid wastes when they are recycled in any manner:

(1) Hazardous Waste Nos. F020, F021 (unless used as an ingredient to make a product at the site of generation), F022, F023, F026, and F028.

(2) Secondary materials fed to a halogen acid furnace that exhibit a characteristic of a hazardous waste or are listed as a hazardous waste as defined in

subparts C or D of this part, except for brominated material that meets the following criteria: (12/92, 12/93)

(i) The material must contain a bromine concentration of at least 45%; and (12/93)

(ii) The material must contain less than a total of 1% of toxic organic compounds listed in appendix VIII; and (12/93)

(iii) The material is processed continually on-site in the halogen acid furnace via direct conveyance (hard piping). (12/93)

(3) The Department will use the following criteria to add wastes to that list (12/92):

(i) (A) The materials are ordinarily disposed of, burned, or incinerated; or

(B) The materials contain toxic constituents listed in Appendix VIII of 261 and these constituents are not ordinarily found in raw materials or products for which the materials substitute (or are found in raw materials or products in smaller concentrations) and are not used or reused during the recycling process; and

(ii) The material may pose a substantial hazard to human health and the environment when recycled.

(e) Materials that are not solid waste when recycled.

(1) Materials are not solid wastes when they can be shown to be recycled by being:

(i) Used or reused as ingredients in an industrial process to make a product, provided the materials are not being reclaimed or land disposed; or (5/96)

(ii) Used or reused as effective substitutes for commercial products; or

(iii) Returned to the original process from which they are generated, without first being reclaimed or land disposed. The material must be returned as a substitute for feedstock materials. In cases where the original process to which the material is returned is a secondary process, the materials must be managed such that there is no placement on the land. In cases where the materials are generated and reclaimed within the primary mineral processing industry, the conditions of the exclusion found at 261.4(a)(17) apply rather than this paragraph. (5/96, 11/99; 8/00)

(2) The following materials are solid wastes, even if the recycling involves use, reuse, or return to the original process (described in paragraphs (e)(1)(i) through (iii) of this section):

(i) Materials used in a manner constituting disposal, or used to produce products that are applied to the land; or

(ii) Materials burned for energy recovery, used to produce a fuel, or contained in fuels; or

(iii) Materials accumulated speculatively; or

(iv) Materials listed in paragraphs (d)(1) and (d)(2) of this section. (12/93, 11/99)

(f) Documentation of claims that materials are not solid wastes or are conditionally exempt from regulation. Respondents in actions to enforce regulations implementing the SC Hazardous Waste Management Act Sections 44-56-10 et seq. and Subtitle C of RCRA who raise a claim that a certain material is not a solid waste, or is conditionally exempt from regulation, must demonstrate that there is a known market or disposition for the material, and that they meet the terms of the exclusion or exemption. In doing so, they must provide appropriate documentation (such as contracts showing that a second person uses the

261.3 Definition of hazardous waste

material as an ingredient in a production process) to demonstrate that the material is not a waste, or is exempt from regulation. In addition, owners or operators of facilities claiming that they actually are recycling materials must show that they have the necessary equipment to do so (12/93, 11/99).

261.3 Definition of hazardous waste

(a) A solid waste, as defined in 261.2, is a hazardous waste if: (11/99)

(1) It is not excluded from regulation as a hazardous waste under 261.4(b); and (11/99)

(2) It meets any of the following criteria:

(i) It exhibits any of the characteristics of hazardous waste identified in subpart C of this part. However, any mixture of a waste from the extraction, beneficiation, and processing of ores and minerals excluded under 261.4(b)(7) and any other solid waste exhibiting a characteristic of hazardous waste under subpart C is a hazardous waste only if it exhibits a characteristic that would not have been exhibited by the excluded waste alone if such mixture had not occurred, or if it continues to exhibit any of the characteristics exhibited by the non-excluded wastes prior to mixture. Further, for the purposes of applying the Toxicity Characteristic to such mixtures, the mixture is also a hazardous waste if it exceeds the maximum concentration for any contaminant listed in Table 1 to 261.24 that would not have been exceeded by the excluded waste alone if the mixture had not occurred, or if it continues to exceed the maximum concentration for any contaminant exceeded by the nonexempt waste prior to mixture. (11/90, 12/93, 11/99)

(ii) It is listed in subpart D and has not been excluded from the lists in subpart D of this part under 260.20 and 260.22.

(iii) [Reserved 6/02]

(iv) It is a mixture of solid waste and one or more hazardous wastes listed in subpart D of this part and has not been excluded from paragraph (a)(2) of this paragraph under 260.20 and 260.22, paragraph (g) of this section, or paragraph (h) of this section; however, the following mixtures of solid wastes and hazardous wastes listed in subpart D of this part are not hazardous wastes (except by application of paragraph (a)(2) (i) or (ii) of this section) if the generator can demonstrate that the mixture consists of wastewater the discharge of which is subject to regulation under the S. C. Pollution Control Act Section 48-1-10 et seq., of the S. C. Code of Laws of 1976, as amended and under either section 402 or section 307(b) of the Clean Water Act (including wastewater at facilities which have eliminated the discharge of wastewater) and: (11/90; 12/93, 6/02)

(A) One or more of the following solvents listed in section 261.31 - benzene, carbon tetrachloride, tetrachloroethylene, trichloroethylene or the scrubber waters derived from the combustion of these spent

solvents--- Provided, that the maximum total weekly usage of these solvents (other than the amounts that can be demonstrated not to be discharged to wastewater) divided by the average weekly flow of wastewater into the headworks of the facility's wastewater treatment or pretreatment system does not exceed 1 part per million; or the total measured concentration of these solvents entering the headworks of the facility's wastewater treatment system (at facilities subject to regulation under the Clean Air Act, as amended, at 40 CFR parts 60, 61, or 63, or at facilities subject to an enforceable limit in a federal operating permit that minimizes fugitive emissions), does not exceed 1 part per million on an average weekly basis. Any facility that uses benzene as a solvent and claims this exemption must use an aerated biological wastewater treatment system and must use only lined surface impoundments or tanks prior to secondary clarification in the wastewater treatment system. Facilities that choose to measure concentration levels must file a copy of their sampling and analysis plan with the Department. A facility must file a copy of a revised sampling and analysis plan only if the initial plan is rendered inaccurate by changes in the facility's operations. The sampling and analysis plan must include the monitoring point location (headworks), the sampling frequency and methodology, and a list of constituents to be monitored. (6/08)

A facility is eligible for the direct monitoring option once they receive confirmation that the sampling and analysis plan has been received by the Department. The Department may reject the sampling and analysis plan if the Department finds that, the sampling and analysis plan fails to include the above information; or the plan parameters would not enable the facility to calculate the weekly average concentration of these chemicals accurately. If the Department rejects the sampling and analysis plan or if the Department finds that the facility is not following the sampling and analysis plan, the Department shall notify the facility to cease the use of the direct monitoring option until such time as the bases for rejection are corrected; or (6/08)

(B) One or more of the following spent solvents listed in Section 261.31 - methylene chloride, 1,1,1-trichloroethane, chlorobenzene, o-dichlorobenzene, cresols, cresylic acid, nitrobenzene, toluene, methyl ethyl ketone, carbon disulfide, isobutanol, pyridine, spent chlorofluorocarbon solvents, 2-ethoxyethanol, or the scrubber waters derived-from the combustion of these spent solvents - provided that the maximum total weekly usage of these solvents (other than the amounts that can be demonstrated not to be discharged to wastewater) divided by the average weekly flow of wastewater into the headworks of the facility's wastewater treatment or pre-treatment system does not exceed 25 parts per million; or the total measured concentration of these solvents entering the headworks of the facility's wastewater treatment system

(at facilities subject to regulation under the Clean Air Act as amended, at 40 CFR parts 60, 61, or 63, or at facilities subject to an enforceable limit in a federal operating permit that minimizes fugitive emissions), does not exceed 25 parts per million on an average weekly basis. Facilities that choose to measure concentration levels must file a copy of their sampling and analysis plan with the the Department as the context requires, or an authorized representative. A facility must file a copy of a revised sampling and analysis plan only if the initial plan is rendered inaccurate by changes in the facility's operations. The sampling and analysis plan must include the monitoring point location (headworks), the sampling frequency and methodology, and a list of constituents to be monitored. A facility is eligible for the direct monitoring option once they receive confirmation that the sampling and analysis plan has been received by the Department. The Department may reject the sampling and analysis plan if the Department finds that, the sampling and analysis plan fails to include the above information; or the plan parameters would not enable the facility to calculate the weekly average concentration of these chemicals accurately. If the Department rejects the sampling and analysis plan or if the Department finds that the facility is not following the sampling and analysis plan, the Department shall notify the facility to cease the use of the direct monitoring option until such time as the bases for rejection are corrected; or (6/08)

(C) One of the following wastes listed in 261.32, provided that the wastes are discharged to the refinery oil recovery sewer before primary oil/water/solids separation heat exchanger bundle cleaning sludge from the petroleum refining industry (EPA Hazardous Waste No. K050), crude oil storage tank sediment from petroleum refining operations (EPA Hazardous Waste No. K169), clarified slurry oil tank sediment and/or in-line filter/separation solids from petroleum refining operations (EPA Hazardous Waste No. K170), spent hydrotreating catalyst (EPA Hazardous Waste No. K171), and spent hydrotreating catalyst (EPA Hazardous Waste No. K172); or (8/00)

(D) A discarded hazardous waste, commercial chemical product, or chemical intermediate listed in 261.31 through 261.33, arising from de minimis losses of these materials. For purposes of this paragraph (a)(2)(iv)(D), "de minimis" losses are inadvertent releases to a wastewater treatment system, including those from normal material handling operations (e.g., spills from the unloading or transfer of materials from bins or other containers, leaks from pipes, valves or other devices used to transfer materials); minor leaks of process equipment, storage tanks or containers; leaks from well maintained pump packings and seals; sample purgings; relief device discharges; discharges from safety showers and rinsing and cleaning of personal safety equipment; and rinsate

from empty containers or from containers that are rendered empty by that rinsing. Any manufacturing facility that claims an exemption for de minimis quantities of wastes listed in 261.31 through 261.32, or any nonmanufacturing facility that claims an exemption for de minimis quantities of wastes listed in subpart D of this part must either have eliminated the discharge of wastewaters or have included in its Clean Water Act permit application or submission to its pretreatment control authority the constituents for which each waste was listed (in 261 Appendix VII) of this part; and the constituents in the table "Treatment Standards for Hazardous Wastes" in 268.40 for which each waste has a treatment standard (i.e., Land Disposal Restriction constituents). A facility is eligible to claim the exemption once the permit writer or control authority has been notified of possible de minimis releases via the Clean Water Act permit application or the pretreatment control authority submission. A copy of the Clean Water permit application or the submission to the pretreatment control authority must be placed in the facility's on-site files; or (6/08)

(E) Wastewater resulting from laboratory operations containing toxic (T) wastes listed in subpart D of this part, provided, that the annualized average flow of laboratory wastewater does not exceed one percent of total wastewater flow into the headworks of the facility's wastewater treatment or pre-treatment system, or provided the wastes, combined annualized average concentration does not exceed one part per million in the headworks of the facility's wastewater treatment or pre-treatment facility. Toxic (T) wastes used in laboratories that are demonstrated not to be discharged to wastewater are not to be included in this calculation; or (5/96)

(F) One or more of the following wastes listed in 261.32 - wastewaters from the production of carbamates and carbamoyl oximes (EPA Hazardous Waste No. K157) - Provided that the maximum weekly usage of formaldehyde, methyl chloride, methylene chloride, and triethylamine (including all amounts that cannot be demonstrated to be reacted in the process, destroyed through treatment, or is recovered, i.e., what is discharged or volatilized) divided by the average weekly flow of process wastewater prior to any dilution into the headworks of the facility's wastewater treatment system does not exceed a total of 5 parts per million by weight OR the total measured concentration of these chemicals entering the headworks of the facility's wastewater treatment system (at facilities subject to regulation under the Clean Air Act as amended, at 40 CFR parts 60, 61, or 63, or at facilities subject to an enforceable limit in a federal operating permit that minimizes fugitive emissions), does not exceed 5 parts per million on an average weekly basis. Facilities that choose to measure concentration levels must file copy of their sampling and analysis plan with

the Department or an authorized representative. A facility must file a copy of a revised sampling and analysis plan only if the initial plan is rendered inaccurate by changes in the facility's operations. The sampling and analysis plan must include the monitoring point location (headworks), the sampling frequency and methodology, and a list of constituents to be monitored. A facility is eligible for the direct monitoring option once they receive confirmation that the sampling and analysis plan has been received by the Department. The Department may reject the sampling and analysis plan if the Department finds that, the sampling and analysis plan fails to include the above information; or the plan parameters would not enable the facility to calculate the weekly average concentration of these chemicals accurately. If the Department rejects the sampling and analysis plan or if the Department finds that the facility is not following the sampling and analysis plan, the Department shall notify the facility to cease the use of the direct monitoring option until such time as the bases for rejection are corrected; or (6/08)

(G) Wastewaters derived from the treatment of one or more of the following wastes listed in 261.32 - organic waste (including heavy ends, still bottoms, light ends, spent solvents, filtrates, and decantates) from the production of carbamates and carbamoyl oximes (EPA Hazardous Waste No. K156). - *Provided*, that the maximum concentration of formaldehyde, methyl chloride, methylene chloride, and triethylamine prior to any dilutions into the headworks of the facility's wastewater treatment system does not exceed a total of 5 milligrams per liter OR the total measured concentration of these chemicals entering the headworks of the facility's wastewater treatment system (at facilities subject to regulation under the Clean Air Act as amended, at 40 CFR parts 60, 61, or 63, or at facilities subject to an enforceable limit in a federal operating permit that minimizes fugitive emissions), does not exceed 5 milligrams per liter on an average weekly basis. Facilities that choose to measure concentration levels must file copy of their sampling and analysis plan with the Department or an authorized representative. A facility must file a copy of a revised sampling and analysis plan only if the initial plan is rendered inaccurate by changes in the facility's operations. The sampling and analysis plan must include the monitoring point location (headworks), the sampling frequency and methodology, and a list of constituents to be monitored. A facility is eligible for the direct monitoring option once they receive confirmation that the sampling and analysis plan has been received by the Department. The Department may reject the sampling and analysis plan if the Department finds that, the sampling and analysis plan fails to include the above information; or the plan parameters would not enable the facility to calculate the weekly average concentration of these chemicals accurately. If

the Department rejects the sampling and analysis plan or if the Department finds that the facility is not following the sampling and analysis plan, the Department shall notify the facility to cease the use of the direct monitoring option until such time as the bases for rejection are corrected. (6/08)

(v) Rebuttable presumption for used oil. Used oil containing more than 1000 ppm total halogens is presumed to be a hazardous waste because it has been mixed with halogenated hazardous waste listed in subpart D of part 261 of this chapter. Persons may rebut this presumption by demonstrating that the used oil does not contain hazardous waste (for example, by using an analytical method from SW-846, Third Edition, to show that the used oil does not contain significant concentrations of halogenated hazardous constituents listed in appendix VIII of part 261 of this chapter). EPA Publication SW-846, Third Edition, is available for the cost of \$110.00 from the Government Printing Office, Superintendent of Documents, PO Box 371954, Pittsburgh, PA 15250-7954. 202-783-3238 (document number 955-001-00000-1). (11/99)

(A) The rebuttable presumption does not apply to metalworking oils/fluids containing chlorinated paraffins, if they are processed, through a tolling agreement, to reclaim metalworking oils/fluids. The presumption does apply to metalworking oils/fluids if such oils/fluids are recycled in any other manner, or disposed. (11/99)

(B) The rebuttable presumption does not apply to used oils contaminated with chlorofluorocarbons (CFCs) removed from refrigeration units where the CFCs are destined for reclamation. The rebuttable presumption does apply to used oils contaminated with CFCs that have been mixed with used oil from sources other than refrigeration units. (11/99)

(b) A solid waste which is not excluded from regulation under paragraph (a)(1) of this section becomes a hazardous waste when any of the following events occur:

(1) In the case of a waste listed in subpart D of this part, when the waste first meets the listing description set forth in subpart D of this part.

(2) In the case of a mixture of solid waste and one or more listed hazardous wastes, when a hazardous waste listed in subpart D is first added to the solid waste. (8/00)

(3) In the case of any other waste (including a waste mixture), when the waste exhibits any of the characteristics identified in subpart C of this part.

(c) Unless and until it meets the criteria of paragraph (d) of this part:

(1) A hazardous waste will remain a hazardous waste.

(2)(i) Except as otherwise provided in paragraph (c)(2)(ii), (g) or (h), any solid waste generated from the

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treatment, storage, or disposal of a hazardous waste, including any sludge, spill residue, ash emission control dust, or leachate (but not including precipitation run-off) is a hazardous waste. (However, materials that are reclaimed from solid wastes and that are used beneficially are not solid wastes and hence are not hazardous wastes under this provision unless the reclaimed material is burned for energy recovery or used in a manner constituting disposal.) (6/02, 6/03)

(ii) The following solid wastes are not hazardous even though they are generated from the treatment, storage, or disposal of a hazardous waste, unless they exhibit one or more of the characteristics of hazardous waste:

(A) Waste pickle liquor sludge generated by lime stabilization of spent pickle liquor from the iron and steel industry (SIC Codes 331 and 332).

(B) Waste from burning any of the materials exempted from regulation by section 261.6(a)(3)(iii) and (iv) (12/92; 5/96; 8/00).

(C) (1) Nonwastewater residues, such as slag, resulting from high temperature metals recovery (HTMR) processing of K061, K062, or F006 waste, in units identified as rotary kilns, flame reactors, electric furnaces, plasma arc furnaces, slag reactors, rotary hearth furnace/electric furnace combinations or industrial furnaces (as defined in paragraphs (6), (7), and (13) of the definition for Industrial furnace" in 260.10), that are disposed in subtitle D units, provided that these residues meet the generic exclusion levels identified in the tables in this paragraph for all constituents, and exhibit no characteristics of hazardous waste. Testing requirements must be incorporated in a facility's waste analysis plan or a generator's self-implementing waste analysis plan; at a minimum, composite samples of residues must be collected and analyzed quarterly and/or when the process or operation generating the waste changes. Persons claiming this exclusion in an enforcement action will have the burden of proving by clear and convincing evidence that the material meets all of the exclusion requirements. (12/92; 12/93)

Constituent	Maximum for any single composite sample (mg/l)
Generic exclusion levels for K061 and K062 nonwastewater HTMR residues	
Antimony	0.10
Arsenic	0.50
Barium	7.6
Beryllium	0.010
Cadmium	0.050
Chromium (total)	0.33
Lead	0.15
Mercury	0.009
Nickel	1.0
Selenium	0.16
Silver	0.30

Constituent	Maximum for any single composite sample (mg/l)
Thallium	0.020
Zinc	70.
Generic exclusion levels for F006 nonwastewater HTMR residues	
Antimony	0.10
Arsenic	0.50
Barium	7.6
Beryllium	0.010
Cadmium	0.050
Chromium (total)	0.33
Cyanide (total) (mg/kg)	1.8
Lead	0.15
Mercury	0.009
Nickel	1.0
Selenium	0.16
Silver	0.30
Thallium	0.020
Zinc	70.0

(2) A one-time notification and certification must be placed in the facility's files and sent to the Department for K061, K062, or F006 HTMR residues that meet the generic exclusion levels for all constituents and do not exhibit any characteristics that are sent to subtitle D units. The notification and certification that is placed in the generators or treaters files must be updated if the process or operation generating the waste changes and/or if the subtitle D unit receiving the waste changes. However, the generator or treater need only notify the Department on an annual basis if such changes occur. Such notification and certification should be sent to the Department by the end of the calendar year, but no later than December 31. The notification must include the following information: The name and address of the subtitle D unit receiving the waste shipments; the EPA Hazardous Waste Number(s) and treatability group(s) at the initial point of generation; and, the treatment standards applicable to the waste at the initial point of generation. The certification must be signed by an authorized representative and must state as follows: "I certify under penalty of law that the generic exclusion levels for all constituents have been met without impermissible dilution and that no characteristic of hazardous waste is exhibited. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment." (12/93; 5/96)

(D) Biological treatment sludge from the treatment of one of the following wastes listed in 261.32 - organic waste (including heavy ends, still bottoms, light ends, spent solvents, filtrates, and decantates) from the production of carbamates and carbamoyl oximes (EPA Hazardous Waste No. K157). (10/01)

(E) Catalyst inert support media separated from one of the following wastes listed in 261.32 Spent

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hydrotreating catalyst (EPA Hazardous Waste No. K171), and Spent hydrorefining catalyst (EPA Hazardous Waste No. K172). (8/00)

(d) Any solid waste described in paragraph (c) of this section is not a hazardous waste if it meets the following criteria:

(1) In the case of any solid waste, it does not exhibit any of the characteristics of hazardous waste identified in subpart C of this part. (However, wastes that exhibit a characteristic at the point of generation may still be subject to the requirements of part 268, even if they no longer exhibit a characteristic at the point of land disposal) (12/92).

(2) In the case of a waste which is a listed waste under subpart D of this part, contains a waste listed under subpart D of this part or is derived from a waste listed in subpart D of this part, it also has been excluded from paragraph (c) under 260.20 and 260.22.

(e) For the purposes of this regulation the wastes listed in Appendix XI will be considered hazardous.

(f) Notwithstanding paragraphs (a) through (d) of this section and provided the debris as defined in part 268 does not exhibit a characteristic identified at subpart C of this part, the following materials are not subject to regulation under 260, 261 to 266, 268, or 270: (12/93)

(1) Hazardous debris as defined in part 268 that has been treated using one of the required extraction or destruction technologies specified in Table 1 of 268.45; persons claiming this exclusion in an enforcement action will have the burden of proving by clear and convincing evidence that the material meets all of the exclusion requirements; or (12/93)

(2) Debris as defined in part 268 that the Department, considering the extent of contamination, has determined is no longer contaminated with hazardous waste. (12/93)

(g) (1) A hazardous waste that is listed in subpart D of this part solely because it exhibits one or more characteristics of ignitability as defined under 261.21, corrosivity as defined under 261.22, or reactivity as defined under 261.23 is not a hazardous waste, if the waste no longer exhibits any characteristic of hazardous waste identified in subpart C of this part. (6/02)

(2) The exclusion described in paragraph (g)(1) of this section also pertains to:

(i) Any mixture of a solid waste and a hazardous waste listed in subpart D of this part solely because it exhibits the characteristics of ignitability, corrosivity, or reactivity as regulated under paragraph (a)(2)(iv) of this section; and

(ii) Any solid waste generated from treating, storing, or disposing of a hazardous waste listed in subpart D of this part solely because it exhibits the characteristics of ignitability, corrosivity, or reactivity as regulated under paragraph (c)(2)(i) of this section.

(3) Wastes excluded under this section are subject to part 268 of this chapter (as applicable), even if they no longer exhibit a characteristic at the point of land disposal.

(4) Any mixture of a solid waste excluded from regulation under 261.4(b)(7) and a hazardous waste listed in Subpart D solely because it exhibits one or more of the characteristics of ignitability, corrosivity, or reactivity as regulated under paragraph (a)(2)(iv) is not a hazardous waste, if the mixture no longer exhibits any characteristic of hazardous waste identified in Subpart C for which the hazardous waste listed in Subpart D was listed. (6/03)

(h) (1) Hazardous waste containing radioactive waste is no longer a hazardous waste when it meets the eligibility criteria and conditions of 266, Subpart N ("eligible radioactive mixed waste"). (6/02)

(2) The exemption described in paragraph (h)(1) of this section also pertains to:

(i) Any mixture of a solid waste and an eligible radioactive mixed waste; and

(ii) Any solid waste generated from treating, storing, or disposing of an eligible radioactive mixed waste.

(3) Waste exempted under this section must meet the eligibility criteria and specified conditions in 266.225 and 266.230 (for storage and treatment). Waste that fails to satisfy these eligibility criteria and conditions is regulated as hazardous waste.

261.4 Exclusions

(a) Materials which are not solid wastes. The following materials are not solid wastes for the purpose of this part:

(1)(i) Domestic sewage; and

(ii) Any mixture of domestic sewage and other wastes that passes through a sewer system to a publicly owned treatment works for treatment. "Domestic sewage" means untreated sanitary wastes that pass through a sewer system.

(2) Industrial wastewater discharges that are point source discharges subject to regulation under Section 48-1-10 et seq., of the S. C. Code of Laws of 1976, and section 402 of the Clean Water Act, as amended. (12/93)

[Comment: This exclusion applies only to the actual point source discharge. It does not exclude industrial wastewaters while they are being collected, stored or treated before discharge, nor does it exclude sludges that are generated by industrial wastewater treatment] (12/92).

(3) Irrigation return flows.

(4) Source, special nuclear or by-product material as defined by the Atomic Energy Act of 1954, as amended, 42 U.S.C. 2011 et seq.

(5) Materials subjected to in-situ mining techniques which are not removed from the ground as part of the extraction process.

(6) Pulping liquors (i.e., black liquor) that are reclaimed in a pulping liquor recovery furnace and then reused in the pulping process, unless it is accumulated speculatively as defined in Section 261.1(c).

(7) Spent sulfuric acid used to produce virgin sulfuric acid, unless it is accumulated speculatively as defined in Section 261.1(c).

(8) Secondary materials that are reclaimed and returned to the original process or processes in which they were generated where they are reused in the production process provided:

(i) Only tank storage is involved, and the entire process through completion of reclamation is closed by being entirely connected with pipes or other comparable enclosed means of conveyance;

(ii) Reclamation does not involve controlled flame combustion (such as occurs in boilers, industrial furnaces, or incinerators);

(iii) The secondary materials are never accumulated in such tanks for over twelve months without being reclaimed; and

(iv) The reclaimed material is not used to produce a fuel, or used to produce products that are used in a manner constituting disposal.

(9) (12/92)

(i) Spent wood preserving solutions that have been reclaimed and are reused for their original intended purpose; and

(ii) Wastewaters from the wood preserving process that have been reclaimed and are reused to treat wood.

(iii) Prior to reuse, the wood preserving wastewaters and spent wood preserving solutions described in paragraphs (a)(9)(i) and (a)(9)(ii) of this section, so long as they meet all of the following conditions: (11/99)

(A) The wood preserving wastewaters and spent wood preserving solutions are reused on-site at water borne plants in the production process for their original intended purpose; (11/99)

(B) Prior to reuse, the wastewaters and spent wood preserving solutions are managed to prevent release to either land or groundwater or both; (11/99)

(C) Any unit used to manage wastewaters and/or spent wood preserving solutions prior to reuse can be visually or otherwise determined to prevent such releases; (11/99)

(D) Any drip pad used to manage the wastewaters and/or spent wood preserving solutions prior to reuse complies with the standards in part 265, subpart W of this chapter, regardless of whether the plant generates a total of less than 100 kg/month of hazardous waste; and (11/99)

(E) Prior to operating pursuant to this exclusion, the plant owner or operator prepares a one-time notification stating that the plant intends to claim the exclusion, giving the date on which the plant intends to begin operating under the exclusion, and containing the following language: "I have read the applicable regulation establishing an exclusion for wood preserving wastewaters and spent wood preserving solutions and understand it requires me to comply at all times with the conditions set out in the regulation."

The plant must maintain a copy of that document in its on-site records until closure of the facility. The exclusion applies so long as the plant meets all of the conditions. If the plant goes out of compliance with any condition, it may apply to the appropriate Department for reinstatement. The Department may reinstate the exclusion upon finding that the plant has returned to compliance with all conditions and that the violations are not likely to recur. (6/08)

(10) EPA Hazardous Waste Nos. K060, K087, K141, K142, K143, K144, K145, K147, and K148, and any wastes from the coke byproducts processes that are hazardous only because they exhibit the Toxicity Characteristic (TC) specified in section 261.24 of this part when, subsequent to generation, these materials are recycled to coke ovens, to the tar recovery process as a feedstock to produce coal tar, or are mixed with coal tar prior to the tar's sale or refining. This exclusion is conditioned on there being no land disposal of the wastes from the point they are generated to the point they are recycled to coke ovens or the tar recovery or refining processes, or mixed with coal tar. (12/93, 6/04)

(11) Nonwastewater splash condenser dross residue from the treatment of K061 in high temperature metals recovery units, provided it is shipped in drums (if shipped) and not land disposed before recovery. (12/93)

(12) (i) Oil-bearing hazardous secondary materials (i.e., sludges, byproducts, or spent materials) that are generated at a petroleum refinery (SIC code 2911) and are inserted into the petroleum refining process (SIC code 2911 - including, but not limited to, distillation, catalytic cracking, fractionation, or thermal cracking units (i.e., cokers)) unless the material is placed on the land, or speculatively accumulated before being so recycled. Materials inserted into thermal cracking units are excluded under this paragraph, provided that the coke product also does not exhibit a characteristic of hazardous waste. Oil-bearing hazardous secondary materials may be inserted into the same petroleum refinery where they are generated, or sent directly to another petroleum refinery, and still be excluded under this provision. Except as provided in paragraph (a)(12)(ii) of this section, oil-bearing hazardous secondary materials generated elsewhere in the petroleum industry (i.e., from sources other than petroleum refineries) are not excluded under this

section. Residuals generated from processing or recycling materials excluded under this paragraph (a)(12)(i), where such materials as generated would have otherwise met a listing under subpart D of this part, are designated as F037 listed wastes when disposed of or intended for disposal. (5/96, 9/98; 8/00)

(ii) Recovered oil that is recycled in the same manner and with the same conditions as described in paragraph (a)(12)(i) of this section. Recovered oil is oil that has been reclaimed from secondary materials (including wastewater) generated from normal petroleum industry practices, including refining, exploration and production, bulk storage, and transportation incident thereto (SIC codes 1311, 1321, 1381, 1382, 1389, 2911, 4612, 4613, 4922, 4923, 4789, 5171, and 5172.) Recovered oil does not include oil-bearing hazardous wastes listed in subpart D of this part; however, oil recovered from such wastes may be considered recovered oil. Recovered oil does not include used oil as defined in 40 CFR 279.1. (8/00)

(13) Excluded scrap metal (processed scrap metal, unprocessed home scrap metal, and unprocessed prompt scrap metal) being recycled. (9/98)

(14) Shredded circuit boards being recycled provided that they are: (9/98)

(i) Stored in containers sufficient to prevent a release to the environment prior to recovery; and

(ii) Free of mercury switches, mercury relays and nickel cadmium batteries and lithium batteries.

(15) Condensates derived from the overhead gases from kraft mill steam strippers that are used to comply with 40 CFR 63.446(e). The exemption applies only to combustion at the mill generating the condensates. (11/99)

(16) Comparable fuels or comparable syngas fuels (i.e., comparable/syngas fuels) that meet the requirements of 261.38. (11/99, 8/00)

(17) Spent materials (as defined in 261.1) (other than hazardous wastes listed in subpart D of this part) generated within the primary mineral processing industry from which minerals, acids, cyanide, water, or other values are recovered by mineral processing, or by beneficiation, provided that: (11/99; 8/00, 6/03)

(i) The spent material is legitimately recycled to recover minerals, acids, cyanide, water or other values; (6/03)

(ii) The spent material is not accumulated speculatively; (6/03)

(iii) Except as provided in paragraph (a)(17)(iv) of this section, the spent material is stored in tanks, containers, or buildings meeting the following minimum integrity standards: a building must be an engineered structure with a floor, walls, and a roof all of which are made of non-earthen materials providing structural support (except smelter buildings may have partially earthen floors provided the secondary material is stored on the non-earthen portion), and have a roof

suitable for diverting rainwater away from the foundation; a tank must be free standing, not be a surface impoundment (as defined in 260.10), and be manufactured of a material suitable for containment of its contents; a container must be free standing and be manufactured of a material suitable for containment of its contents. If tanks or containers contain any particulate which may be subject to wind dispersal, the owner/operator must operate these units in a manner which controls fugitive dust. Tanks, containers, and buildings must be designed, constructed and operated to prevent significant releases to the environment of these materials. (8/00, 6/03)

(iv) The Department may make a site-specific determination, after public review and comment, that only solid mineral processing spent material may be placed on pads rather than tanks, containers, or buildings. Solid mineral processing spent materials do not contain any free liquid. The decision-maker must affirm that pads are designed, constructed and operated to prevent significant releases of the secondary material into the environment. Pads must provide the same degree of containment afforded by the non-RCRA tanks, containers and buildings eligible for exclusion. (6/03)

(A) The decision-maker must also consider if storage on pads poses the potential for significant releases via groundwater, surface water, and air exposure pathways. Factors to be considered for assessing the groundwater, surface water, air exposure pathways are: the volume and physical and chemical properties of the secondary material, including its potential for migration off the pad; the potential for human or environmental exposure to hazardous constituents migrating from the pad via each exposure pathway, and the possibility and extent of harm to human and environmental receptors via each exposure pathway.

(B) Pads must meet the following minimum standards: be designed of non-earthen material that is compatible with the chemical nature of the mineral processing spent material, capable of withstanding physical stresses associated with placement and removal, have run on/runoff controls, be operated in a manner which controls fugitive dust, and have integrity assurance through inspections and maintenance programs. (6/03)

(C) Before making a determination under this paragraph, the Department must provide notice and the opportunity for comment to all persons potentially interested in the determination. This can be accomplished by placing notice of this action in major local newspapers, or broadcasting notice over local radio stations.

(v) The owner or operator provides notice to the Department, providing the following information: the types of materials to be recycled; the type and

location of the storage units and recycling processes; and the annual quantities expected to be placed in land-based units. This notification must be updated when there is a change in the type of materials recycled or the location of the recycling process. (8/00, 6/03)

(vi) For purposes of 261.4(a)(7) mineral processing spent materials must be the result of mineral processing and may not include any listed hazardous wastes. Listed hazardous wastes and characteristic hazardous wastes generated by non-mineral processing industries are not eligible for the conditional exclusion from the definition of solid waste. (6/03)

(18) Petrochemical recovered oil from an associated organic chemical manufacturing facility, where the oil is to be inserted into the petroleum refining process (SIC code 2911) along with normal petroleum refinery process streams, provided: (8/00)

(i) The oil is hazardous only because it exhibits the characteristic of ignitability (as defined in 261.21) and/or toxicity for benzene (261.24, waste code D018); and

(ii) The oil generated by the organic chemical manufacturing facility is not placed on the land, or speculatively accumulated before being recycled into the petroleum refining process. An "associated organic chemical manufacturing facility" is a facility where the primary SIC code is 2869, but where operations may also include SIC codes 2821, 2822, and 2865; and is physically co-located with a petroleum refinery; and where the petroleum refinery to which the oil being recycled is returned also provides hydrocarbon feedstocks to the organic chemical manufacturing facility. "Petrochemical recovered oil" is oil that has been reclaimed from secondary materials (i.e., sludges, byproducts, or spent materials, including wastewater) from normal organic chemical manufacturing operations, as well as oil recovered from organic chemical manufacturing processes.

(19) Spent caustic solutions from petroleum refining liquid treating processes used as a feedstock to produce cresylic or naphthenic acid unless the material is placed on the land, or accumulated speculatively as defined in 261.1(c). (8/00)

(20) Hazardous secondary materials used to make zinc fertilizers, provided that the following conditions specified are satisfied: (6/04)

(i) Hazardous secondary materials used to make zinc micronutrient fertilizers must not be accumulated speculatively, as defined in 261.1(c)(8).

(ii) Generators and intermediate handlers of zinc-bearing hazardous secondary materials that are to be incorporated into zinc fertilizers must:

(A) Submit a one-time notice to the Department which contains the name, address and EPA ID number of the generator or intermediate handler facility, provides a brief description of the secondary material that will be subject to the exclusion, and

identifies when the manufacturer intends to begin managing excluded, zinc-bearing hazardous secondary materials under the conditions specified in this paragraph (a)(20).

(B) Store the excluded secondary material in tanks, containers, or buildings that are constructed and maintained in a way that prevents releases of the secondary materials into the environment. At a minimum, any building used for this purpose must be an engineered structure made of non-earthen materials that provide structural support, and must have a floor, walls and a roof that prevent wind dispersal and contact with rainwater. Tanks used for this purpose must be structurally sound and, if outdoors, must have roofs or covers that prevent contact with wind and rain. Containers used for this purpose must be kept closed except when it is necessary to add or remove material, and must be in sound condition. Containers that are stored outdoors must be managed within storage areas that:

- (1) have containment structures or systems sufficiently impervious to contain leaks, spills and accumulated precipitation; and
- (2) provide for effective drainage and removal of leaks, spills and accumulated precipitation; and
- (3) prevent run-on into the containment system.

(C) With each off-site shipment of excluded hazardous secondary materials, provide written notice to the receiving facility that the material is subject to the conditions of this paragraph (a)(20).

(D) Maintain at the generator's or intermediate handler's facility for no less than three years records of all shipments of excluded hazardous secondary materials. For each shipment these records must at a minimum contain the following information:

- (1) Name of the transporter and date of the shipment;
- (2) Name and address of the facility that received the excluded material, and documentation confirming receipt of the shipment; and
- (3) Type and quantity of excluded secondary material in each shipment.

(iii) Manufacturers of zinc fertilizers or zinc fertilizer ingredients made from excluded hazardous secondary materials must:

(A) Store excluded hazardous secondary materials in accordance with the storage requirements for generators and intermediate handlers, as specified in paragraph (a)(20)(ii)(B) of this section.

(B) Submit a one-time notification to the Department that, at a minimum, specifies the name, address and EPA ID number of the manufacturing facility, and identifies when the manufacturer intends to begin managing excluded, zinc-bearing hazardous

secondary materials under the conditions specified in this paragraph (a)(20).

(C) Maintain for a minimum of three years records of all shipments of excluded hazardous secondary materials received by the manufacturer, which must at a minimum identify for each shipment the name and address of the generating facility, name of transporter and date the materials were received, the quantity received, and a brief description of the industrial process that generated the material.

(D) Submit to the Department an annual report that identifies the total quantities of all excluded hazardous secondary materials that were used to manufacture zinc fertilizers or zinc fertilizer ingredients in the previous year, the name and address of each generating facility, and the industrial process(s) from which they were generated.

(iv) Nothing in this section preempts, overrides or otherwise negates the provision in 262.11 of this chapter, which requires any person who generates a solid waste to determine if that waste is a hazardous waste.

(v) Interim status and permitted storage units that have been used to store only zinc-bearing hazardous wastes prior to the submission of the one-time notice described in paragraph (a)(20)(ii)(A), and that afterward will be used only to store hazardous secondary materials excluded under this paragraph, are not subject to the closure requirements of 264 and 265.

(21) Zinc fertilizers made from hazardous wastes, or hazardous secondary materials that are excluded under paragraph (a)(20) of this section, provided that: (6/04)

(i) The fertilizers meet the following contaminant limits:

(A) For metal contaminants:

Constituent (6/04)	Maximum Allowable Total Concentration in Fertilizer, per Unit (1%) of Zinc (ppm)
Arsenic	0.3
Cadmium	1.4
Chromium	0.6
Lead	2.8
Mercury	0.3

(B) For dioxin contaminants the fertilizer must contain no more than eight (8) parts per trillion of dioxin, measured as toxic equivalent (TEQ).

(ii) The manufacturer performs sampling and analysis of the fertilizer product to determine compliance with the contaminant limits for metals no less than every six months, and for dioxins no less than every twelve months. Testing must also be performed whenever changes occur to manufacturing processes or ingredients that could significantly affect the amounts of contaminants in the fertilizer product. The manufacturer may use any reliable analytical method to

demonstrate that no constituent of concern is present in the product at concentrations above the applicable limits. It is the responsibility of the manufacturer to ensure that the sampling and analysis are unbiased, precise, and representative of the product(s) introduced into commerce.

(iii) The manufacturer maintains for no less than three years records of all sampling and analyses performed for purposes of determining compliance with the requirements of paragraph (a)(21)(ii) of this section. Such records must at a minimum include:

- (A) The dates and times product samples were taken, and the dates the samples were analyzed;
- (B) The names and qualifications of the person(s) taking the samples;
- (C) A description of the methods and equipment used to take the samples;
- (D) The name and address of the laboratory facility at which analyses of the samples were performed;
- (E) A description of the analytical methods used, including any cleanup and sample preparation methods; and
- (F) All laboratory analytical results used to determine compliance with the contaminant limits specified in this paragraph (a)(21).

(22) [Reserved 6/04]

(23) [Reserved and Withdrawn 6/04]

(24) [Withdrawn 6/04]

(b) Solid wastes which are not hazardous wastes. The following solid wastes are not hazardous wastes:

(1) Household waste, including household waste that has been collected, transported, stored, treated, disposed, recovered (e.g., refuse-derived fuel) or reused. "Household waste" means any material (including garbage, trash and sanitary wastes in septic tanks) derived from households (including single and multiple residences, hotels and motels, bunkhouses, ranger stations, crew quarters, campgrounds, picnic grounds and day use recreation areas). A resource recovery facility managing municipal solid waste shall not be deemed to be treating, storing, disposing of, or otherwise managing hazardous wastes for the purpose of regulation under this subtitle, if such facility (12/92; 12/93, 6/03):

(i) Receives and burns only

(A) Household waste (from single and multiple dwellings, hotels, motels, and other residential sources) and

(B) Solid waste from commercial or industrial sources that does not contain hazardous waste; and

(ii) Such facility does not accept hazardous wastes and the owner or operator of such facility has established contractual requirements or other appropriate notification or inspection procedures to

assure that hazardous wastes are not received at or burned in such facility.

(2) Solid wastes generated by any of the following and which are returned to the soils as fertilizers:

(i) The growing and harvesting of agricultural crops.

(ii) The raising of animals, including animal manures.

(3) Mining overburden returned to the mine site if such overburden is handled in compliance with all applicable provisions of the S. C. Mining Act, Section 48-20-10 et seq., S. C. Code of Laws, 1976, as amended.

(4) Fly ash waste, bottom ash waste, slag waste, and flue gas emission control waste generated primarily from the combustion of coal or other fossil fuels, except as provided by 266.112 for facilities that burn or process hazardous waste (12/92).

(5) Drilling fluids, produced waters, and other wastes associated with the exploration, development, or production of crude oil, natural gas or geothermal energy.

(6) (i) Wastes which fail the test for the Toxicity Characteristic because chromium is present or are listed in subpart D due to the presence of chromium, which do not fail the test for the Toxicity Characteristic for any other constituent or are not listed due to the presence of any other constituent, and which do not fail the test for any other characteristic, if it is shown by a waste generator or by waste generators that: (11/90)

(A) The chromium in the waste is exclusively (or nearly exclusively) trivalent chromium; and

(B) The waste is generated from an industrial process which uses trivalent chromium exclusively (or nearly exclusively) and the process does not generate hexavalent chromium; and

(C) The waste is typically and frequently managed in non-oxidizing environments.

(ii) Specific wastes which meet the standard in paragraphs (b)(6)(i) (A), (B), and (C) (so long as they do not fail the test for the toxicity characteristic for any other constituent, and do not exhibit any other characteristic) are: (11/90; 12/93)

(A) Chrome (blue) trimmings generated by the following subcategories of the leather tanning and finishing industry: Hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; retan/wet finish; no beamhouse; through-the-blue; and shearling. (11/90; 12/92)

(B) Chrome (blue) shavings generated by the following subcategories of the leather tanning and finishing industry: hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; retan/wet finish; no beamhouse; through-the-blue; and shearling.

(C) Buffing dust generated by the following subcategories of the leather tanning and finishing industry: Hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; retan/wet finish; no beamhouse; through-the-blue.

(D) Sewer screenings generated by the following subcategories of the leather tanning and finishing industry: Hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; retan/wet finish; no beamhouse; through-the-blue; and shearling.

(E) Wastewater treatment sludges generated by the following subcategories of the leather tanning and finishing industry: Hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; retan/wet finish; no beamhouse; through-the-blue; and shearling. (12/92)

(F) Wastewater treatment sludges generated by the following subcategories of the leather tanning and finishing industry: Hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; and through-the-blue.

(G) Waste scrap leather from the leather tanning industry, the shoe manufacturing industry, and other leather product manufacturing industries.

(H) Wastewater treatment sludges from the production of TiO_2 pigment using chromium-bearing ores by the chloride process.

(7) Solid waste from the extraction, beneficiation, and processing of ores and minerals (including coal, phosphate rock, and overburden from the mining of uranium ore), except as provided by 266.112 for facilities that burn or process hazardous waste.

(i) For purposes of 261.4(b)(7), beneficiation of ores and minerals is restricted to the following activities: crushing; grinding; washing; dissolution; crystallization; filtration; sorting; sizing; drying; sintering; pelletizing; briquetting; calcining to remove water and/or carbon dioxide; roasting, autoclaving, and/or chlorination in preparation for leaching (except where the roasting (and/or autoclaving and/or chlorination)/leaching sequence produces a final or intermediate product that does not undergo further beneficiation or processing); gravity concentration; magnetic separation; electrostatic separation; flotation; ion exchange; solvent extraction; electrowinning; precipitation; amalgamation; and heap, dump, vat, tank, and in situ leaching.

(ii) For the purposes of 261.4(b)(7), solid waste from the processing of ores and minerals includes only the following wastes as generated: (12/92, 11/99)

- (A) Slag from primary copper processing;
- (B) Slag from primary lead processing;
- (C) Red and brown muds from bauxite refining;
- (D) Phosphogypsum from phosphoric acid production;

- (E) Slag from elemental phosphorus production;
- (F) Gasifier ash from coal gasification;
- (G) Process wastewater from coal gasification;
- (H) Calcium sulfate wastewater treatment plant sludge from primary copper processing;
- (I) Slag tailings from primary copper processing;
- (J) Fluorogypsum from hydrofluoric acid production;
- (K) Process wastewater from hydrofluoric acid production;
- (L) Air pollution control dust/sludge from iron blast furnaces;
- (M) Iron blast furnace slag;
- (N) Treated residue from roasting/leaching of chrome ore;
- (O) Process wastewater from primary magnesium processing by the anhydrous process;
- (P) Process wastewater from phosphoric acid production;
- (Q) Basic oxygen furnace and open hearth furnace air pollution control dust/sludge from carbon steel production;
- (R) Basic oxygen furnace and open hearth furnace slag from carbon steel production;
- (S) Chloride process waste solids from titanium tetrachloride production;
- (T) Slag from primary zinc processing.

(iii) A residue derived from co-processing mineral processing secondary materials with normal beneficiation raw materials or with normal mineral processing raw materials remains excluded under paragraph (b) of this section if the owner or operator: (11/99; 8/00)

- (A) Processes at least 50 percent by weight normal beneficiation raw materials or normal mineral processing raw materials; and,
- (B) Legitimately reclaims the secondary mineral processing materials.

(8) Cement kiln dust waste, except as provided by 266.112 for facilities that burn or process hazardous waste (12/92).

(9) Solid waste which consists of discarded arsenical-treated wood or wood products which fails the test for the Toxicity Characteristic for Hazardous Waste Codes D004 through D017 and which is not a hazardous waste for any other reason, if the waste is generated by persons who utilize the arsenical-treated wood and wood product for these materials' intended end use. (11/90; 12/92; 12/93)

(10) Petroleum-contaminated media and debris that fail the test for the Toxicity Characteristic of section 261.24 (Hazardous Waste Codes D018 through D043 only) and are subject to the corrective action regulations under 40 CFR 280. (11/90)

(11) [Reserved]

(12) Used chlorofluorocarbon refrigerants from totally enclosed heat transfer equipment, including mobile air conditioning systems, mobile refrigeration, and commercial and industrial air conditioning and refrigeration systems that use chlorofluorocarbons as the heat transfer fluid in a refrigeration cycle, provided the refrigerant is reclaimed for further use (12/92).

(13) Non-terne plated used oil filters that are not mixed with wastes listed in Subpart D of this part if these oil filters have been gravity hot-drained using one of the following methods: (12/93)

(i) Puncturing the filter anti-drain back valve or the filter dome end and hot-draining;

(ii) Hot-draining and crushing;

(iii) Dismantling and hot-draining; or

(iv) Any other equivalent hot-draining method that will remove used oil.

(14) Used oil re-refining distillation bottoms that are used as feedstock to manufacture asphalt products. (12/93)

(15) Leachate or gas condensate collected from landfills where certain solid wastes have been disposed, provided that: (8/00, 6/03)

(i) The solid wastes disposed would meet one or more of the listing descriptions for Hazardous Waste Codes K169, K170, K171, K172, K174, K175, K176, K177, K178, and K181, if these wastes had been generated after the effective date of the listing; (6/03, 2/07)

(ii) The solid wastes described in paragraph (b)(15)(i) of this section were disposed prior to the effective date of the listing;

(iii) The leachate or gas condensate do not exhibit any characteristic of hazardous waste nor are derived from any other listed hazardous waste;

(iv) Discharge of the leachate or gas condensate, including leachate or gas condensate transferred from the landfill to a POTW by truck, rail, or dedicated pipe, is subject to regulation under sections 307(b) or 402 of the Clean Water Act.

(v) As of February 13, 2001, leachate or gas condensate derived from K169-K172 is no longer exempt if it is stored or managed in a surface impoundment prior to discharge. As of November 21, 2003, leachate or gas condensate derived from K176, K177, and K178 is no longer exempt if it is stored or managed in a surface impoundment prior to discharge. After February 26, 2007, leachate or gas condensate derived from K181 will no longer be exempt if it is stored or managed in a surface impoundment prior to discharge. There is one exception: if the surface impoundment is used to temporarily store leachate or gas condensate in response to an emergency situation (e.g., shutdown of wastewater treatment system), provided the impoundment has a double liner, and provided the leachate or gas condensate is removed

from the impoundment and continues to be managed in compliance with the conditions of this paragraph after the emergency ends. (6/03, 2/07)

(c) Hazardous wastes which are exempted from certain regulations. A hazardous waste which is generated in a product or raw material storage tank, a product or raw material transport vehicle or vessel, a product or raw material pipeline, or in a manufacturing process unit or an associated non-waste-treatment-manufacturing unit, is not subject to regulation under 262 through 266, 268, 270, and 124 or to the notification requirements of South Carolina Hazardous Waste Management Act 44-56-120 and section 3010 of RCRA until it exits the unit in which it was generated, unless the unit is a surface impoundment, or unless the hazardous waste remains in the unit more than 90 days after the unit ceases to be operated for manufacturing, or for storage or transportation of product or raw materials. (11/90; 12/92)

(d) Samples.

(1) Except as provided in paragraph (d)(2) of this section, a sample of solid waste or a sample of water, soil, or air, which is collected for the sole purpose of testing to determine its characteristics or composition, is not subject to any requirements of this part or 262 through 266, 268, 270, or 124 or to the notification requirements of section 3010 of RCRA and the South Carolina Hazardous Waste Management Act 44-56-120 when: (11/90; 12/92)

(i) The sample is being transported to a laboratory for the purpose of testing; or

(ii) The sample is being transported back to the sample collector after testing; or

(iii) The sample is being stored by the sample collector before transport to a laboratory for testing; or

(iv) The sample is being stored in a laboratory before testing; or

(v) The sample is being stored in a laboratory after testing but before it is returned to the sample collector; or

(vi) The sample is being stored temporarily in the laboratory after testing for a specific purpose (for example, until conclusion of a court case or enforcement action where further testing of the sample may be necessary).

(2) In order to qualify for the exemption in paragraphs (d)(1) (i) and (ii) of this section, a sample collector shipping samples to a laboratory and a laboratory returning samples to a sample collector must:

(i) Comply with U.S. Department of Transportation (DOT), U.S. Postal Service (USPS), or any other applicable shipping requirements; or

(ii) Comply with the following requirements if the sample collector determines that DOT, USPS, or other shipping requirements do not apply to the shipment of the sample:

(A) Assure that the following information accompanies the sample:

- (1) The sample collector's name, mailing address, and telephone number;
- (2) The laboratory's name, mailing address, and telephone number;
- (3) The quantity of the sample;
- (4) The date of shipment; and
- (5) A description of the sample.

(B) Package the sample so that it does not leak, spill, or vaporize from its packaging.

(3) This exemption does not apply if the laboratory determines that the waste is hazardous but the laboratory is no longer meeting any of the conditions stated in paragraph (d)(1) of this section.

(e) Treatability Study Samples. (11/90; 12/94)

(1) Except as provided in paragraph (e)(2) of this section, persons who generate or collect samples for the purpose of conducting treatability studies as defined in section 260.10, are not subject to any requirement of parts 261 through 263 or to the notification requirements of SC 44-56-120 and Section 3010 of RCRA, nor are such samples included in the quantity determinations of 261.5 and 262.34(d) when (12/92):

(i) The sample is being collected and prepared for transportation by the generator or sample collector; or

(ii) The sample is being accumulated or stored by the generator or sample collector prior to transportation to a laboratory or testing facility; or

(iii) The sample is being transported to the laboratory or testing facility for the purpose of conducting a treatability study.

(2) The exemption in paragraph (e)(1) of this section is applicable to samples of hazardous waste being collected and shipped for the purpose of conducting treatability studies provided that:

(i) The generator or sample collector uses (in "treatability studies") no more than 10,000 kg of media contaminated with non-acute hazardous waste, 1000 kg of non-acute hazardous waste other than contaminated media, 1 kg of acute hazardous waste, 2500 kg of media contaminated with acute hazardous waste for each process being evaluated for each generated waste stream; and

(ii) The mass of each sample shipment does not exceed 10,000 kg; the 10,000 kg quantity may be all media contaminated with non-acute hazardous waste, or may include 2500 kg of media contaminated with acute hazardous waste, 1000 kg of hazardous waste, and 1 kg of acute hazardous waste; and

(iii) The sample must be packaged so that it will not leak, spill, or vaporize from its packaging during shipment and the requirements of paragraph A or B of this subparagraph are met.

(A) The transportation of each sample shipment complies with U.S. Department of

Transportation (DOT), U.S. Postal Service (USPS), South Carolina Public Service Commission or any other applicable shipping requirements; or

(B) If the DOT, USPS, South Carolina Public Service Commission or other shipping requirements do not apply to the shipment of the sample, the following information must accompany the sample:

- (1) The name, mailing address, and telephone number of the originator of the sample;
- (2) The name, address, and telephone number of the facility that will perform the treatability study;

- (3) The quantity of the sample;
- (4) The date of shipment; and
- (5) A description of the sample, including its EPA Hazardous Waste Number.

(iv) The sample is shipped to a laboratory or testing facility which is exempt under 261.4(f) or has an appropriate RCRA permit or interim status.

(v) The generator or sample collector maintains the following records for a period ending 3 years after completion of the treatability study:

- (A) Copies of the shipping documents;
- (B) A copy of the contract with the facility conducting the treatability study;

(C) Documentation showing:

(1) The amount of waste shipped under this exemption;

(2) The name, address, and EPA identification number of the laboratory or testing facility that received the waste;

(3) The date the shipment was made;

and

(4) Whether or not unused samples and residues were returned to the generator.

(vi) The generator reports the information required under paragraph (e)(2)(v)(C) of this section in its annual report (12/92, 9/98).

(3) The Department may grant requests on a case-by-case basis for up to an additional two years for treatability studies involving bioremediation. The Department may grant requests on a case-by-case basis for quantity limits in excess of those specified in paragraphs (e)(2)(i) and (ii) and (f)(4) of this section, for up to an additional 5000 kg of media contaminated with non-acute hazardous waste, 500 kg of non-acute hazardous waste, 2500 kg of media contaminated with acute hazardous waste and 1 kg of acute hazardous waste;

(i) In response to requests for authorization to ship, store and conduct treatability studies on additional quantities in advance of commencing treatability studies. Factors to be considered in reviewing such requests include the nature of the technology, the type of process (e.g., batch versus continuous), size of the unit undergoing testing (particularly in relation to scale-

up considerations), the time/quantity of material required to reach steady state operating conditions, or test design considerations such as mass balance calculations.

(ii) In response to requests for authorization to ship, store and conduct treatability studies on additional quantities after initiation or completion of initial treatability studies, when: There has been an equipment or mechanical failure during the conduct of a treatability study; there is a need to verify the results of a previously conducted treatability study; there is a need to study and analyze alternative techniques within a previously evaluated treatment process; or there is a need to do further evaluation of an ongoing treatability study to determine final specifications for treatment.

(iii) The additional quantities and timeframes allowed in paragraph (e)(3) (i) and (ii) of this section are subject to all the provisions in paragraphs (e)(1) and (e)(2)(iii) through (vi) of this section. The generator or sample collector must apply to the Department and provide in writing the following information:

(A) The reason why the generator or sample collector requires additional time or quantity of sample for treatability study evaluation and the additional time or quantity needed,

(B) Documentation accounting for all samples of hazardous waste from the waste stream which have been sent for or undergone treatability studies including the date each previous sample from the waste stream was shipped, the quantity of each previous shipment, the laboratory or testing facility to which it was shipped, what treatability study processes were conducted on each sample shipped, and the available results on each treatability study;

(C) A description of the technical modifications or change in specifications which will be evaluated and the expected results;

(D) If such further study is being required due to equipment or mechanical failure, the applicant must include information regarding the reason for the failure or breakdown and also include what procedures or equipment improvements have been made to protect against further breakdowns; and

(E) Such other information that the Department considers necessary.

(f) Samples Undergoing Treatability Studies at Laboratories and Testing Facilities. Samples undergoing treatability studies and the laboratory or testing facility conducting such treatability studies (to the extent such facilities are not otherwise subject to RCRA requirements) are not subject to any requirement of this part, part 124, parts 262 through 266, 268, and 270, or to the notification requirements of SCHWMA 44-56-120 and Section 3010 of RCRA provided that the conditions of paragraphs (f) (1) through (11) of this section are met. A mobile treatment unit (MTU) may

qualify as a testing facility subject to paragraphs (f) (1) through (11) of this section. Where a group of MTUs are located at the same site, the limitations specified in (f) (1) through (11) of this section apply to the entire group of MTUs collectively as if the group were one MTU. (11/90; 12/92; 12/94)

(1) No less than 45 days before conducting treatability studies, the facility notifies the Department in writing that it intends to conduct treatability studies under this paragraph.

(2) The laboratory or testing facility conducting the treatability study has an EPA identification number.

(3) No more than a total of 10,000 kg of "as received" media contaminated with non-acute hazardous waste, 2500 kg of media contaminated with acute hazardous waste or 250 kg of other "as received" hazardous waste is subject to initiation of treatment in all treatability studies in any single day. "As received" waste refers to the waste as received in the shipment from the generator or sample collector.

(4) The quantity of "as received" hazardous waste stored at the facility for the purpose of evaluation in treatability studies does not exceed 10,000 kg, the total of which can include 10,000 kg of media contaminated with non-acute hazardous waste, 2500 kg of media contaminated with acute hazardous waste, 1000 kg of non-acute hazardous wastes other than contaminated media, and 1 kg of acute hazardous waste. This quantity limitation does not include treatment materials (including nonhazardous solid waste) added to "as received" hazardous waste.

(5) No more than 90 days have elapsed since the treatability study for the sample was completed, or no more than one year (two years for treatability studies involving bioremediation) have elapsed since the generator or sample collector shipped the sample to the laboratory or testing facility, whichever date first occurs. Up to 500 kg of treated material from a particular waste stream from treatability studies may be archived for future evaluation up to five years from the date of initial receipt. Quantities of materials archived are counted against the total storage limit for the facility.

(6) The treatability study does not involve the placement of hazardous waste on the land or open burning of hazardous waste.

(7) The facility maintains records for 3 years following completion of each study that show compliance with the treatment rate limits and the storage time and quantity limits. The following specific information must be included for each treatability study conducted:

(i) The name, address, and EPA identification number of the generator or sample collector of each waste sample;

(ii) The date the shipment was received;

(iii) The quantity of waste accepted;

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- (iv) The quantity of "as received" waste in storage each day;
 - (v) The date the treatment study was initiated and the amount of "as received" waste introduced to treatment each day;
 - (vi) The date the treatability study was concluded;
 - (vii) The date any unused sample or residues generated from the treatability study were returned to the generator or sample collector or, if sent to a designated facility, the name of the facility and the EPA identification number.
- (8) The facility keeps, onsite, a copy of the treatability study contract and all shipping papers associated with the transport of treatability study samples to and from the facility for a period ending 3 years from the completion date of each treatability study.
- (9) The facility prepares and submits a report to the Department by March 15 of each year that estimates the number of studies and the amount of waste expected to be used in treatability studies during the current year, and includes the following information for the previous calendar year: (6/08)
- (i) The name, address, and EPA identification number of the facility conducting the treatability studies;
 - (ii) The types (by process) of treatability studies conducted;
 - (iii) The names and addresses of persons for whom studies have been conducted (including their EPA identification numbers);
 - (iv) The total quantity of waste in storage each day;
 - (v) The quantity and types of waste subjected to treatability studies;
 - (vi) When each treatability study was conducted;
 - (vii) The final disposition of residues and unused sample from each treatability study.
- (10) The facility determines whether any unused sample or residues generated by the treatability study are hazardous waste under 261.3 and, if so, are subject to parts 261 through 268, and part 270, unless the residues and unused samples are returned to the sample originator under the 261.4(e) exemption.
- (11) The facility notifies the Department by letter when the facility is no longer planning to conduct any treatability studies at the site. (11/90)
- (g) Dredged material that is not a hazardous waste. Dredged material that is subject to the requirements of a permit that has been issued under 404 of the Federal Water Pollution Control Act (33 U.S.C.1344) or section 103 of the Marine Protection, Research, and Sanctuaries Act of 1972 (33 U.S.C. 1413) is not a hazardous waste. For this paragraph (g), the following definitions apply: (8/00)

(1) The term dredged material has the same meaning as defined in 40 CFR 232.2;

(2) The term permit means:

(i) A permit issued by the U.S. Army Corps of Engineers (Corps) or an approved State under section 404 of the Federal Water Pollution Control Act (33 U.S.C. 1344);

(ii) A permit issued by the Corps under section 103 of the Marine Protection, Research, and Sanctuaries Act of 1972 (33 U.S.C. 1413); or

(iii) In the case of Corps civil works projects, the administrative equivalent of the permits referred to in paragraphs (g)(2)(i) and (ii) of this section, as provided for in Corps regulations (for example, see 33 CFR 336.1, 336.2, and 337.6).

261.5 Special requirements for hazardous waste generated by conditionally exempt small quantity generators

(a) A generator is a conditionally exempt small quantity generator in a calendar month if he generates no more than 100 kilograms of hazardous waste in that month. (6/89, 12/92)

(b) Except for those wastes identified in paragraphs (e), (f), (g), and (j) of this section, a conditionally exempt small quantity generator's hazardous wastes are not subject to regulation under 262 through 266, 268, 270 and 124, and the notification requirements of section 3010 of RCRA and the South Carolina Hazardous Waste Management Act 44-56-60 and provided the generator complies with the requirements of paragraphs (f), (g), and (j) of this section (6/89, 11/90).

(c) When making the quantity determinations of this part and 262, the generator must include all hazardous waste that it generates, except hazardous waste that: (5/96)

(1) Is exempt from regulation under 261.4(c) through (f), 261.6(a)(3), 261.7(a)(1), or 261.8; or (5/96)

(2) Is managed immediately upon generation only in on-site elementary neutralization units, wastewater treatment units, or totally enclosed treatment facilities as defined in 260.10; or (5/96)

(3) Is recycled, without prior storage or accumulation, only in an on-site process subject to regulation under 261.6(c)(2); or (5/96)

(4) Is used oil managed under the requirements of 261.6(a)(4) or (5/96)

(5) Is spent lead-acid batteries managed under the requirements of 266 subpart G; or (5/96)

(6) Is universal waste managed under 261.9 and 273. (5/96)

(d) In determining the quantity of hazardous waste generated, a generator need not include:

(1) Hazardous waste when it is removed from onsite storage; or

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(2) Hazardous waste produced by onsite treatment (including reclamation) of his hazardous waste, so long as the hazardous waste that is treated was counted once; or (6/89)

(3) Spent materials that are generated, reclaimed, and subsequently reused onsite, so long as such spent materials have been counted once. (6/89)

(e) If a generator generates acute hazardous waste in a calendar month in quantities greater than set forth below, all quantities of that acute hazardous waste are subject to full regulation under 262 through 266, 268, R.61-79.270 and 124 and the notification requirements of the South Carolina Hazardous Waste Management Act 44-56-120 and section 3010 of RCRA: (11/90; 12/92)

(1) A total of one kilogram of acute hazardous wastes listed in sections 261.31, 261.32, or 261.33(e).

(2) A total of 100 kilograms of any residue or contaminated soil, waste, or other debris resulting from the clean-up of a spill, into or on any land or water, of any acute hazardous wastes listed in sections 261.31, 261.32, or 261.33(e).

[Comment: "Full regulation" means those regulations applicable to generators of greater than 1,000 kg of non-acutely hazardous waste in a calendar month.] (12/93)

(f) In order for acute hazardous wastes generated by a generator of acute hazardous wastes in quantities equal to or less than those set forth in paragraph (e)(1) or (2) of this section to be excluded from full regulation under this section, the generator must comply with the following requirements: (11/90, 12/92)

(1) Section 262.11;

(2) The generator may accumulate acute hazardous waste onsite. If he accumulates at any time acute hazardous wastes in quantities greater than those set forth in paragraph (e)(1) or (e)(2) of this section, all of those accumulated wastes are subject to regulation under 262 through 266, 268, 270 and 124 and the applicable notification requirements of section 3010 RCRA and the applicable notification requirements of the South Carolina Hazardous Waste Management Act 44-56-120. The time period of 262.34(a) for accumulation of wastes onsite, begins when the accumulated wastes exceed the applicable exclusion limit; (11/90, 12/92)

(3) A conditionally exempt small quantity generator may either treat or dispose of his acute hazardous waste in an onsite facility or ensure delivery to an off-site treatment, storage or disposal facility, either of which, if located in the U.S., is: (6/89)

(i) Permitted under 270;

(ii) In interim status under 270 and 265;

(iii) Authorized to manage hazardous waste by a State with a hazardous waste management program approved under 40 CFR 271; (12/92)

(iv) Permitted, licensed, or registered by the Department to manage municipal solid waste and, if

managed in a municipal solid waste landfill is subject to R.61-107.258; (12/92, 5/96, 9/98)

(v) Permitted, licensed, or registered by a State to manage non-municipal non-hazardous waste and, if managed in a non-municipal non-hazardous waste disposal unit after January 1, 1998, is subject to the requirements in R.61-107.257.5 through 257.30; or (9/98)

(vi) A facility which:

(A) Beneficially uses or reuses, or legitimately recycles or reclaims its waste; or

(B) Treats its waste prior to beneficial use or reuse, or legitimate recycling or reclamation; or (5/96)

(vii) For universal waste managed under part 273, a universal waste handler or destination facility subject to the requirements of 273. (5/96)

(g) In order for hazardous waste generated by a conditionally exempt small quantity generator in quantities of less than 100 kilograms of hazardous waste during a calendar month to be excluded from full regulation under this section, the generator must comply with the following requirements: (6/89)

(1) Section 262.11;

(2) The conditionally exempt small quantity generator may accumulate hazardous waste onsite. If he accumulates at any time more than a total of 1000 kilograms of his hazardous wastes, all of those accumulated wastes are subject to regulation under the special provisions of 262 applicable to generators of between 100 kg and 1000 kg of hazardous waste in a calendar month as well as the requirements of 263 through 266, 268, and 270 and 124 and the applicable notification requirements of section 3010 of RCRA and the notification requirements of the South Carolina Hazardous Waste Management Act 44-56-120. The time period of 262.34(d) for accumulation of wastes onsite begins for a conditionally exempt small quantity generator when the accumulated wastes exceed 1000 kilograms; (11/90, 12/92)

(3) A conditionally exempt small quantity generator may either treat or dispose of his hazardous waste in an onsite facility or ensure delivery to an off-site treatment, storage or disposal facility, either of which, if located in the U.S., is:

(i) Permitted under 270;

(ii) In interim status under 270 and 265;

(iii) Authorized to manage hazardous waste by a State with a hazardous waste management program approved under 40 CFR 271 (12/92);

(iv) Permitted, licensed, or registered by the Department to manage municipal solid waste, and, if managed in a municipal solid waste landfill is subject to R.61-107.258; (6/89, 12/92; 5/96, 9/98)

(v) Permitted, licensed, or registered by the Department to manage non-municipal non-hazardous waste and, if managed in a non-municipal non-

hazardous waste disposal unit after January 1, 1998, is subject to the requirements in R.61-107.257.5 through 257.30; or (9/98)

(vi) A facility which:

(A) Beneficially uses or reuses, or legitimately recycles or reclaims its waste; or

(B) Treats its waste prior to beneficial use or reuse, or legitimate recycling or reclamation; or (5/96)

(vii) For universal waste managed under part 273, a universal waste handler or destination facility subject to the requirements of 273. (5/96)

(h) Hazardous waste subject to the reduced requirements of this section may be mixed with nonhazardous waste and remain subject to these reduced requirements even though the resultant mixture exceeds the quantity limitations identified in this section, unless the mixture meets any of the characteristics of hazardous waste identified in subpart C.

(i) If any person mixes a solid waste with a hazardous waste that exceeds a quantity exclusion level of this section, the mixture is subject to full regulation. (11/90)

(j) If a conditionally exempt small quantity generator's wastes are mixed with used oil, the mixture is subject to R.61-79.107.279. Any material produced from such a mixture by processing, blending, or other treatment is also so regulated. (6/89, 6/06)

(k) [Reserved; moved to 262 12/92]

261.6 Requirements for recyclable materials

(a)(1) Hazardous wastes that are recycled are subject to the requirements for generators, transporters, and storage facilities of paragraphs (b) and (c) of this section, except for the materials listed in paragraphs (a)(2) and (a)(3) of this section. Hazardous wastes that are recycled will be known as "recyclable materials."

(2) The following recyclable materials are not subject to the requirements of this section but are regulated under subparts C through H of 266 and all applicable provisions in 270 and 124 (12/92):

(i) Recyclable materials used in a manner constituting disposal (Part 266, Subpart C);

(ii) Hazardous wastes burned for energy recovery in boilers and industrial furnaces that are not regulated under subpart O of 264 or 265 (Part 266, Subpart H); (11/90, 12/92)

(iii) [Reserved 6/06]

(iv) Recyclable materials from which precious metals are reclaimed (Part 266, Subpart F);

(v) Spent lead-acid batteries that are being reclaimed (Part 266, Subpart G).

(3) The following recyclable materials are not subject to regulation under 262 through 266, or 268, 270 or 124 and are not subject to the notification requirements of the the South Carolina Hazardous

261.6 Requirements for recyclable materials

Waste Management Act 44-56-120 and 3010 RCRA(11/90, 12/92, 6/03, 6/04):

(i) Industrial ethyl alcohol that is reclaimed except that, unless provided otherwise in an international agreement as specified in 262.58:

(A) A person initiating a shipment for reclamation in a foreign country, and any intermediary arranging for the shipment, must comply with the requirements applicable to a primary exporter in sections 262.53, 262.56 (a)(1) - (4), (6), and (b), and 262.57, export such materials only upon consent of the receiving country and in conformance with the EPA Acknowledgement of Consent as defined in subpart E of 262 and provide a copy of the EPA

Acknowledgement of Consent to the shipment to the transporter transporting the shipment for export;(11/90)

(B) Transporters transporting a shipment for export may not accept a shipment if he knows the shipment does not conform to the EPA Acknowledgement of Consent, must ensure that a copy of the EPA Acknowledgement of Consent accompanies the shipment and must ensure that it is delivered to the facility designated by the person initiating the shipment.

(ii) Scrap metal that is not excluded under 261.4(a)(13). (10/01);

(iii) Fuels produced from the refining of oil-bearing hazardous waste along with normal process streams at a petroleum refining facility if such wastes result from normal petroleum refining, production, and transportation practices (this exemption does not apply to fuels produced from oil recovered from oil-bearing hazardous waste, where such recovered oil is already excluded under 261.4(a)(12); (10/01, 6/03)

(iv) (A) Hazardous waste fuel produced from oil-bearing hazardous wastes from petroleum refining, production, or transportation practices, or produced from oil reclaimed from such hazardous wastes, where such hazardous wastes are reintroduced into a process that does not use distillation or does not produce products from crude oil so long as the resulting fuel meets the used oil specification under R.61-79.107.279 and so long as no other hazardous wastes are used to produce the hazardous waste fuel; (12/92, 5/96, 6/03, 6/06)

(B) Hazardous waste fuel produced from oil-bearing hazardous waste from petroleum refining production, and transportation practices, where such hazardous wastes are reintroduced into a refining process after a point at which contaminants are removed, so long as the fuel meets the used oil fuel specification under R.61-79.107.279; and (6/06)

(C) Oil reclaimed from oil-bearing hazardous wastes from petroleum refining, production, and transportation practices, which reclaimed oil is burned as a fuel without reintroduction to a refining process, so long as the reclaimed oil meets the used oil fuel specification under R.61-79.107.279; and (6/06)

(v) [Reserved 6/06]

(vi) Used oil that exhibits one or more of the characteristics of hazardous waste but is recycled in some other manner than being burned for energy recovery (2/92, 8/00, 9/01 6/03)

(4) Used oil that is recycled and is also a hazardous waste solely because it exhibits a hazardous characteristic is not subject to the requirements of parts 260 through 268, but is regulated under R.61-79.107.279.11. Used oil that is recycled includes any used oil which is reused, following its original use, for any purpose (including the purpose for which the oil was originally used). Such term includes, but is not limited to, oil which is re-refined, reclaimed, burned for energy recovery, or reprocessed. (12/93, 6/06)

(5) Hazardous waste that is exported to or imported from designated member countries of the Organization for Economic Cooperation and Development (OECD) (as defined in 262.58(a)(1)) for purpose of recovery is subject to the requirements of part 262, subpart H, if it is subject to either the federal manifesting requirements of Part 262, to the universal waste management standards of Part 273. (9/98)

(b) Generators and transporters of recyclable materials are subject to the applicable requirements of 262 and 263 of these Regulations, and the notification requirements under 44-56-120 and section 3010 of RCRA, except as provided in paragraph (a) of this section (12/92).

(c) (1) Owners and operators of facilities that store recyclable materials before they are recycled are regulated under all applicable provisions of subparts A through L, AA, BB and CC of 264 and 265, and under 266, 268, 270, and 124 and the notification requirements of section 3010 RCRA and the notification requirements of the South Carolina Hazardous Waste Management Act 44-56-120, except as provided in paragraph (a) of this section. (The recycling process itself is exempt from regulation except as provided in 261.6(d).) (11/90, 12/92, 9/98)

(2) Owners or operators of facilities that recycle recyclable materials without storing them before they are recycled are subject to the following requirements, except as provided in paragraph (a) of this section:

(i) Notification requirements under SCHWMA 44-56-120, and section 264.5 or section 265.5 and section 3010 of RCRA; (10/01)

(ii) Sections 265.71 and 265.72 (dealing with the use of the manifest and manifest discrepancies) of 265.

(iii) Section 261.6(d) (12/92).

(d) Owners or operators of facilities subject to RCRA permitting requirements with hazardous waste management units that recycle hazardous wastes are subject to the requirements of subparts AA and BB of part 264 or 265 (12/92).

261.7 Residues of hazardous waste in empty containers

261.7 Residues of hazardous waste in empty containers

(a)(1) Any hazardous waste remaining in either (i) an empty container or (ii) an inner liner removed from an empty container, as defined in paragraph (b) of this section, is not subject to regulation under 261 through 266, or 268, 124, and 270 or to the notification requirements of section 3010 RCRA and the South Carolina Hazardous Waste Management Act 44-56-120. (11/90, 12/92)

(2) Any hazardous waste in either (i) a container that is not empty or (ii) an inner liner removed from a container that is not empty, as defined in paragraph (b) of this section, is subject to regulation under 261 through 266, and 268, 124, and 270 and to the notification requirements of section 3010 RCRA and the South Carolina Hazardous Waste Management Act 44-56-120 (11/90, 12/92).

(b)(1) A container or an inner liner removed from a container that has held any hazardous waste, except a waste that is a compressed gas or that is identified as an acute hazardous waste listed in sections 261.31, 261.32, or 261.33(e) of this regulation, is empty if:

(i) All wastes have been removed that can be removed using the practices commonly employed to remove materials from that type of container, e.g., pouring, pumping, and aspirating, and

(ii) No more than 2.5 centimeters (one inch) of residue remain on the bottom of the container or inner liner, or

(iii)(A) No more than 3 percent by weight of the total capacity of the container remains in the container or inner liner if the container is less than or equal to 119 gallons in size; or

(B) No more than 0.3 percent by weight of the total capacity of the container remains in the container or inner liner if the container is greater than 119 gallons in size.(2/07)

(2) A container that has held a hazardous waste that is a compressed gas is empty when the pressure in the container approaches atmospheric.

(3) A container or an inner liner removed from a container that has held an acute hazardous waste listed in sections 261.31, 261.32, or 261.33(e) of this regulation is empty if:

(i) The container or inner liner has been triple rinsed using a solvent capable of removing the commercial chemical product or manufacturing chemical intermediate;

(ii) The container or inner liner has been cleaned by another method that has been shown in the scientific literature, or by tests conducted by the generator, to achieve equivalent removal; or

(iii) In the case of a container, the inner liner that prevented contact of the commercial chemical product or manufacturing chemical intermediate with the container, has been removed.

261.8 PCB wastes regulated under Toxic Substance Control Act

The disposal of PCB-containing dielectric fluid and electric equipment containing such fluid authorized for use and regulated under 40 CFR 761 and that are hazardous only because they fail the test for the Toxicity Characteristic (Hazardous Waste Codes D018 through D043 only) are exempt from regulation under parts 261 through 265, and parts 268, 270, and 124, and the notification requirements of section 3010 of RCRA and the South Carolina Hazardous Waste Management Act 44-56-120 (11/90, 12/92)

261.9 Requirements for Universal Waste

The wastes listed in this section are exempt from regulation under parts 262 through 270 except as specified in part 273 and, therefore are not fully regulated as hazardous waste. The wastes listed in this section are subject to regulation under 273: (5/96, 8/00)

- (a) Batteries as described in 273.2;
- (b) Pesticides as described in 273.3;
- (c) Mercury containing equipment as described in 273.4; and (6/07)
- (d) Lamps as described in 273.5.

Subpart B - Criteria for Identifying the Characteristics of Hazardous Waste & for Listing Hazardous Waste

261.10 Criteria for identifying the characteristics of hazardous waste

(a) The Department shall identify and define a characteristic of hazardous waste in subpart C only upon determining that (12/92):

(1) A solid waste that exhibits the characteristic may: (11/90)

- (i) Cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or
- (ii) Pose a substantial present or potential hazard to human health or the environment when it is improperly treated, stored, transported, disposed of or otherwise managed; and

(2) The characteristic can be:

- (i) Measured by an available standardized test method which is reasonably within the capability of generators of solid waste or private sector laboratories that are available to serve generators of solid waste; or
- (ii) Reasonably detected by generators of solid waste through their knowledge of their waste.

261.11 Criteria for listing hazardous waste

(a) The Department shall list a solid waste as a hazardous waste only upon determining that the solid waste meets one of the following criteria (12/92):

261.11 Criteria for listing hazardous waste

(1) It exhibits any of the characteristics of hazardous waste identified in subpart C.

(2) It has been found to be fatal to humans in low doses or, in the absence of data on human toxicity, it has been shown in studies to have an oral LD 50 toxicity (rat) of less than 50 milligrams per kilogram, an inhalation LC 50 toxicity (rat) of less than 2 milligrams per liter, or a dermal LD 50 toxicity (rabbit) of less than 200 milligrams per kilogram or is otherwise capable of causing or significantly contributing to an increase in serious irreversible, or incapacitating reversible, illness. (Waste listed in accordance with these criteria will be designated Acute Hazardous Waste.)

(3) It contains any of the toxic constituents listed in appendix VIII and, after considering the following factors, the Department concludes that the waste is capable of posing a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported or disposed of, or otherwise managed: (12/92)

(i) The nature of the toxicity presented by the constituent.

(ii) The concentration of the constituent in the waste.

(iii) The potential of the constituent or any toxic degradation product of the constituent to migrate from the waste into the environment under the types of improper management considered in paragraph (a)(3)(vii) of this section.

(iv) The persistence of the constituent or any toxic degradation product of the constituent.

(v) The potential for the constituent or any toxic degradation product of the constituent to degrade into non-harmful constituents and the rate of degradation.

(vi) The degree to which the constituent or any degradation product of the constituent bioaccumulates in ecosystems.

(vii) The plausible types of improper management to which the waste could be subjected.

(viii) The quantities of the waste generated at individual generation sites or on a regional or national basis.

(ix) The nature and severity of the human health and environmental damage that has occurred as a result of the improper management of wastes containing the constituent.

(x) Action taken by other governmental agencies or regulatory programs based on the health or environmental hazard posed by the waste or waste constituent.

(xi) Such other factors as may be appropriate.

Substances will be listed on Appendix VIII only if they have been shown in scientific studies to have toxic, carcinogenic, mutagenic or teratogenic effects on humans or other life forms.

(Wastes listed in accordance with these criteria will be designated Toxic wastes.)

(b) The Department list classes or types of solid waste as hazardous waste if there is reason to believe that individual wastes, within the class or type of waste, typically or frequently are hazardous under the definition of hazardous waste in Section 261.3 and found in section 1004(5) of RCRA.(10/01)

(c) The Department will use the criteria for listing specified in this section to establish the exclusion limits referred to in Section 261.5(c).

Subpart C - Characteristics of Hazardous Waste

261.20 General

(a) A solid waste, as defined in section 261.2, which is not excluded from regulation as a hazardous waste under section 261.4(b), is a hazardous waste if it exhibits any of the characteristics identified in this subpart.

[Comment: 262.11 sets forth the generators responsibility to determine whether his waste exhibits one or more of the characteristics identified in this subpart (12/92)]

(b) A hazardous waste which is identified by a characteristic in this subpart is assigned every EPA Hazardous Waste Number that is applicable as set forth in this subpart. This number must be used in complying with the notification requirements of section 3010 of the Act and all applicable recordkeeping and reporting requirements under 262 through 266, 268, 270 and the notification requirements of the South Carolina Hazardous Waste Management Act 44-56-120 (11/90, 12/92).

(c) For purposes of this subpart, the Department will consider a sample obtained using any of the applicable sampling methods specified in Appendix I to be a representative sample within the meaning of 260.

[Comment: Since the Appendix I sampling methods are not being formally adopted by the Department, a person who desires to employ an alternative sampling method is not required to demonstrate the equivalency of his method under the procedures set forth in 260.20 and 260.21 (12/92)].

261.21 Characteristic of ignitability

(a) A solid waste exhibits the characteristic of ignitability if a representative sample of the waste has any of the following properties:

(1) It is a liquid, other than an aqueous solution containing less than 24 percent alcohol by volume and has flash point less than 60°C (140° F) as determined by a Pensky-Martens Closed Cup Tester, using the test method specified in ASTM Standard D-93-79 or D-93-80 (incorporated by reference, see 260.11) or a Setaflash Closed Cup Tester, using the test method specified in ASTM Standard D-3278-78 (incorporated

261.23 Characteristic of reactivity

by reference, see 260.11), or as determined by an equivalent test method approved by the Department under procedures set forth in 260.20 and 260.21. (11/90, 12/92)

(2) It is not a liquid and is capable, under standard temperature and pressure, of causing fire through friction, absorption of moisture or spontaneous chemical changes and, when ignited, burns so vigorously and persistently that it creates a hazard.

(3) It is an ignitable compressed gas as defined in 49 CFR 173.115 and as determined by the test methods described in that regulation or equivalent test methods approved by the Department under 260.20 and 260.21. (12/93, 6/06)

(4) It is an oxidizer as defined in 49 CFR 173.127. (6/06)

(b) A solid waste that exhibits the characteristic of ignitability has the EPA Hazardous Waste Number of D001 (12/92).

261.22 Characteristic of corrosivity

(a) A solid waste exhibits the characteristic of corrosivity if a representative sample of the waste has either of the following properties: (12/94)

(1) It is aqueous and has a pH less than or equal to 2 or greater than or equal to 12.5, as determined by a pH meter using Method 9040 in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as incorporated by reference in 260.11. (12/93, 9/01)

(2) It is a liquid and corrodes steel (SAE 1020) at a rate greater than 6.35 mm (0.250 inch) per year at a test temperature of 55°C (130°F) as determined by the test method specified in NACE (National Association of Corrosion Engineers) Standard TM-01-69 as standardized in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA publication SW-846, incorporated by reference in 260.11. (12/93)

(b) A solid waste that exhibits the characteristic of corrosivity has the EPA Hazardous Waste Number of D002. (12/92)

261.23 Characteristic of reactivity

(a) A solid waste exhibits the characteristic of reactivity if a representative sample of the waste has any of the following properties:

(1) It is normally unstable and readily undergoes violent change without detonating.

(2) It reacts violently with water.

(3) It forms potentially explosive mixtures with water.

(4) When mixed with water, it generates toxic gases, vapors or fumes in a quantity sufficient to present a danger to human health or the environment.

(5) It is a cyanide or sulfide bearing waste which, when exposed to pH conditions between 2 and 12.5, can generate toxic gases, vapors or fumes in a quantity

sufficient to present a danger to human health or the environment.

(6) It is capable of detonation or explosive reaction if it is subjected to a strong initiating source or if heated under confinement.

(7) It is readily capable of detonation or explosive decomposition or reaction at standard temperature and pressure.

(8) It is a forbidden explosive as defined in 49 CFR 173.51, or a Class A explosive as defined in 49 CFR 173.53 or a Class B explosive as defined in 49 CFR 173.88.

(b) A solid waste that exhibits the characteristic of reactivity has the EPA Hazardous Waste Number of D003. (12/92)

261.24 Toxicity characteristic (11/90)

(a) A solid waste (except manufactured gas plant waste) exhibits the characteristic of toxicity if, using

261.24 Toxicity characteristic (11/90)

the Toxicity Characteristic Leaching Procedure, test Method 1311 in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as incorporated by reference in 260.11, the extract from a representative sample of the waste contains any of the contaminants listed in Table I at the concentration equal to or greater than the respective value given in that table. Where the waste contains less than 0.5 percent filterable solids, the waste itself, after filtering using the methodology outlined in Method 1311, is considered to be the extract for the purpose of this section. (12/92, 12/93, 12/94, 6/03)

(b) A solid waste that exhibits the characteristic of toxicity has the EPA Hazardous Waste Number specified in Table 1 which corresponds to the toxic contaminant causing it to be hazardous (12/92).

261.24(b) Table 1 Maximum Concentration of Contaminants for the Toxicity Characteristic (11/90)			
EPA HW # ¹	Contaminant	CAS No. ²	Regulatory Level (mg/L)
D004	Arsenic	7440-38-2	5.0
D005	Barium	7440-39-3	100.0
D018	Benzene	71-43-2	0.5
D006	Cadmium	7440-43-9	1.0
D019	Carbon tetrachloride	56-23-5	0.5
D020	Chlordane	57-74-9	0.03
D021	Chlorobenzene	108-90-7	100.0
D022	Chloroform	67-66-3	6.0
D007	Chromium	7440-47-3	5.0
D023	o-Cresol	95-48-7	⁴ 200.0
D024	m-Cresol	108-39-4	⁴ 200.0
D025	p-Cresol	106-44-5	⁴ 200.0
D026	Cresol	⁴ 200.0
D016	2,4-D	94-75-7	10.0
D027	1,4-Dichlorobenzene	106-46-7	7.5
D028	1,2-Dichloroethane	107-06-2	0.5
D029	1,1-Dichloroethylene	75-35-4	0.7
D030	2,4-Dinitrotoluene	121-14-2	³ 0.13
D012	Endrin	72-20-8	0.02
D031	Heptachlor (and its epoxide)	76-44-8	0.008
D032	Hexachlorobenzene	118-74-1	³ 0.13
D033	Hexachlorobutadiene	87-68-3	0.5
D034	Hexachloroethane	67-72-1	3.0
D008	Lead	7439-92-1	5.0
D013	Lindane	58-89-9	0.4
D009	Mercury	7439-97-6	0.2
D014	Methoxychlor	72-43-5	10.0
D035	Methyl ethyl ketone	78-93-3	200.0
D036	Nitrobenzene	98-95-3	2.0
D037	Pentachlorophenol	87-86-5	100.0
D038	Pyridine	110-86-1	³ 5.0
D010	Selenium	7782-49-2	1.0
D011	Silver	7440-22-4	5.0
D039	Tetrachloroethylene	127-18-4	0.7
D015	Toxaphene	8001-35-2	0.5
D040	Trichloroethylene	79-01-6	0.5
D041	2,4,5-Trichlorophenol	95-95-4	400.0
D042	2,4,6-Trichlorophenol	88-06-2	2.0
D017	2,4,5-TP (Silvex)	93-72-1	1.0
D043	Vinyl chloride	75-01-4	0.2

¹ Hazardous waste number.

² Chemical abstracts service number.

³ Quantitation limit is greater than the calculated regulatory level. The quantitation limit therefore becomes the regulatory level.

⁴ If o-, m-, and p-Cresol concentrations cannot be differentiated, the total cresol (D026) concentration is used. The regulatory level of total cresol is 200 mg/l.

Subpart D - Lists of Hazardous Wastes

261.30 General

(a) A solid waste is a hazardous waste if it is listed in this subpart, unless it has been excluded from this list under 260.20 and 260.22.

(b) The Department will indicate the basis for listing the classes or types of wastes listed in this subpart by employing one or more of the following Hazard Codes: (11/90)

Ignitable Waste (I)

Corrosive Waste (C)

Reactive Waste (R)

Toxicity Characteristic (E)

Acute Hazardous Waste (H)

Toxic Waste (T)

Appendix VII identifies the constituent which caused the Department to list the waste as a Toxicity Characteristic Waste (E) or Toxic Waste (T) in sections 261.31 and 261.32.

(c) Each hazardous waste listed in this subpart is assigned an EPA Hazardous Waste Number which precedes the name of the waste. This number must be used in complying with the notification requirements of SC 44-56-120 and RCRA Section 3010 and certain recordkeeping and reporting requirements under 262 through 266, 268, and 270. (12/92)

(d) The following hazardous wastes listed in section 261.31 or 261.32 are subject to the exclusion limits for acutely hazardous wastes established in section 261.5: EPA Hazardous Wastes Numbers F020, F021, F022, F023, F026, and F027.

261.31 Hazardous wastes from non-specific sources

(a) The following solid wastes are listed hazardous wastes from non-specific sources unless they are excluded under 260.20 and 260.22 and listed in Appendix IX.

Industry & EPA HW#	261.31 Table Hazardous waste from nonspecific sources (11/90, 12/92)	Hazard code
Generic: F001	The following spent halogenated solvents used in degreasing: Tetrachloroethylene, trichloroethylene, methylene chloride, 1,1,1-trichloroethane, carbon tetrachloride, and chlorinated fluorocarbons; all spent solvent mixtures/blends used in degreasing containing, before use, a total of ten percent or more (by volume) of one or more of the above halogenated solvents or those solvents listed in F002, F004, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.	(T)
F002	The following spent halogenated solvents: Tetrachloroethylene, methylene chloride, trichloroethylene, 1,1,1-trichloroethane, chlorobenzene, 1,1,2-trichloro-1,2,2-trifluoroethane, ortho-dichlorobenzene, trichlorofluoromethane, and 1, 1, 2-trichloroethane; all spent solvent mixtures/blends containing, before use, a total of ten percent or more (by volume) of one or more of the above halogenated solvents or those listed in F001, F004, or F005; and still bottoms from the recovery of these spent solvents and spent solvents mixtures.	(T)
F003	The following spent non-halogenated solvents: Xylene, acetone, ethyl acetate, ethyl benzene, ethyl ether, methyl isobutyl ketone, n-butyl alcohol, cyclohexanone, and methanol; all spent solvent mixtures/blends containing, before use, only the above spent non-halogenated solvents; and all spent solvent mixtures/blends containing, before use, one or more of the above non-halogenated solvents, and, a total of ten percent or more (by volume) of one or more of those solvents listed in F001, F002, F004, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.	(I)
F004	The following spent non-halogenated solvents: Cresols and cresylic acid, and nitrobenzene; all spent solvent mixtures/blends containing, before use, a total of ten percent or more (by volume) of one or more of the above non-halogenated solvents or those solvents listed in F001, F002, and F005; and still bottoms from the recovery of these spent solvents and spent solvents mixtures.	(T)
F005	The following spent non-halogenated solvents: Toluene, methyl ethyl ketone, carbon disulfide, isobutanol, pyridine, benzene, 2-ethoxyethanol, and 2-nitropropane; all spent solvent mixtures/blends containing, before use, a total of ten percent or more (by volume) of one or more of the above non-halogenated solvents or those solvents listed in F001, F002, or F004; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.	(I, T)
F006	Wastewater treatment sludges from electroplating operations except from the following processes: (1) Sulfuric acid anodizing of aluminum; (2) tin plating on carbon steel; (3) zinc plating (segregated basis) on carbon steel; (4) aluminum or zinc-aluminum plating on carbon steel; (5) cleaning/stripping associated with tin, zinc and aluminum plating a carbon steel; and (6) chemical etching and milling of aluminum.	(T)
F007	Spent cyanide plating bath solutions from electroplating operations.	(R, T)
F008	Plating bath residues from the bottom of plating baths from electroplating operations where cyanides are used in the process.	(R, T)
F009	Spent stripping and cleaning bath solutions from electroplating operations where cyanides are used in the process.	(R, T)

261.31 Hazardous wastes from non-specific sources

Industry & EPA HW#	261.31 Table Hazardous waste from nonspecific sources (11/90, 12/92)	Hazard code
F010	Quenching bath residues from oil baths from metal heat treating operations where cyanides are used in the process.	(R, T)
F011	Spent cyanide solutions from salt bath pot cleaning from metal heat treating operations.	(R, T)
F012	Quenching wastewater treatment sludges from metal heat treating operations where cyanides are used in the process.	(T)
F019	Wastewater treatment sludges from the chemical conversion coating of aluminum except from zirconium phosphating in aluminum can washing when such phosphating is an exclusive conversion coating process. (12/93)	(T)
F020	Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tri- or tetrachlorophenol, or of intermediates used to produce their pesticide derivatives. (This listing does not include wastes from the production of Hexachlorophene from highly purified 2,4,5-trichlorophenol).	(H)
F021	Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of pentachlorophenol, or of intermediates used to produce its derivatives.	(H)
F022	Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tetra-, penta-, or hexachlorobenzenes under alkaline conditions.	(H)
F023	Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production of materials on equipment previously used for the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tri- and tetrachlorophenols. (This listing does not include wastes from equipment used only for the production or use of Hexachlorophene from highly purified 2,4, 5-trichlorophenol.)	(H)
F024	Process wastes, including, but not limited to, distillation residues, heavy ends, tars, and reactor cleanout wastes from the production of certain chlorinated aliphatic hydrocarbons by free radical catalyzed processes. These chlorinated aliphatic hydrocarbons are those having carbon chain lengths ranging from one to and including five, with varying amounts and positions of chlorine substitution. [This listing does not include wastewater, wastewater treatment sludges, spent catalysts, and wastes listed in Section 261.31 or 261.32]. (12/93)	(T)
F025	Condensed light ends, spent filters and filter aids, and spent desiccant wastes from the production of certain chlorinated aliphatic hydrocarbons, by free radical catalyzed processes. These chlorinated aliphatic hydrocarbons are those having carbon chain lengths ranging from one to and including five, with varying amounts and depositions of chlorine substitution.	(T)
F026	Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production of materials on equipment previously used for the manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tetra-, penta-, or hexachlorobenzene under alkaline conditions.	(H)
F027	Discarded unused formulations containing tri-, tetra- or pentachlorophenol or discarded unused formulations containing compounds derived from these chlorophenols. (This listing does not include formulations containing hexachlorophene synthesized from pre-purified 2,4,5-trichlorophenol as the sole component.).	(H)
F028	Residues resulting from the incineration or thermal treatment of soil contaminated with EPA Hazardous Waste Nos. F020, F021, F022, F023, F026, and F027.	(T)
F032	Wastewaters (except those that have not come into contact with process contaminants), process residuals, preservative drippage, and spent formulations from wood preserving processes generated at plants that currently use or have previously used chlorophenolic formulations (except potentially cross-contaminated wastes that have had the F032 waste code deleted in accordance with 261.35 or potentially cross-contaminated wastes that are otherwise currently regulated as hazardous wastes (i.e., F034 or F035), and where the generator does not resume or initiate use of chlorophenolic formulations). This listing does not include K001 bottom sediment sludge from the treatment of wastewater from wood preserving processes that use creosote and/or pentachlorophenol. (12/93)	(T)
F034	Wastewaters (except those that have not come into contact with process contaminants), process residuals, preservative drippage, and spent formulations from wood preserving processes generated at plants that use creosote formulations. This listing does not include K001 bottom sediment sludge from the treatment of wastewater from wood preserving processes that use creosote and/or pentachlorophenol. (12/93)	(T)
F035	Wastewaters (except those that have not come into contact with process contaminants), process residuals, preservative drippage, and spent formulations from wood preserving processes generated at plants that use inorganic preservatives containing arsenic or chromium. This listing does not include K001 bottom sediment sludge from the treatment of wastewater from wood preserving processes that use creosote and/or pentachlorophenol. (12/93)	(T)

261.32 Hazardous wastes from specific sources

Industry & EPA HW#	261.31 Table Hazardous waste from nonspecific sources (11/90, 12/92)	Hazard code
F037	Petroleum refinery primary oil/water/solids separation sludge-Any sludge generated from the gravitational separation of oil/water/solids during the storage or treatment of process wastewaters and oily cooling wastewaters from petroleum refineries. Such sludges include, but are not limited to: those generated in oil/water/solids separators; tanks and impoundments; ditches and other conveyances; sumps; and stormwater units receiving dry weather flow. Sludge generated in stormwater units that do not receive dry weather flow, sludges generated from non-contact once-through cooling waters segregated for treatment from other process or oily cooling waters, sludges generated in aggressive biological treatment units as defined in 261.31(b)(2) (including sludges generated in one or more additional units after wastewaters have been treated in aggressive biological treatment units) and K051 wastes are not included in this listing. This listing does include residuals generated from processing or recycling oil-bearing hazardous secondary materials excluded under 261.4(a)(12)(i), if those residuals are to be disposed of. (8/00, 9/01)	(T)
F038	Petroleum refinery secondary (emulsified) oil/water/solids separation sludge-Any sludge and/or float generated from the physical and/or chemical separation of oil/water/solids in process wastewaters and oily cooling wastewaters from petroleum refineries. Such wastes include, but are not limited to, all sludges and floats generated in: induced air flotation (IAF) units, tanks and impoundments, and all sludges generated in DAF units. Sludges generated in stormwater units that do not receive dry weather flow, sludges generated from non-contact once-through cooling waters segregated for treatment from other process or oily cooling waters, sludges and floats generated in aggressive biological treatment units as defined in 261.31(b)(2) (including sludges and floats generated in one or more additional units after wastewaters have been treated in aggressive biological treatment units) and F037, K048, and K051 wastes are not included in this listing (12/92).	(T)
F039	Leachate (liquids that have percolated through land disposed wastes) resulting from the disposal of more than one restricted waste classified as hazardous under subpart D of this part. (Leachate resulting from the disposal of one or more of the following EPA Hazardous Wastes and no other Hazardous Wastes retains its EPA Hazardous Waste Number(s): F020, F021, F022, F023, F026, F027, and/or F028.) (12/92, 12/93).	(T)

*(I,T) should be used to specify mixtures that are ignitable and contain toxic constituents.

(b) Listing Specific Definitions:

(1) For the purposes of the F037 and F038 listings, oil/water/solids is defined as oil and/or water and/or solids (12/92).

(2)(i) For the purposes of the F037 and F038 listings, aggressive biological treatment units are defined as units which employ one of the following four treatment methods: activated sludge; trickling filter; rotating biological contactor for the continuous accelerated biological oxidation of wastewaters; or high-rate aeration. High-rate aeration is a system of surface impoundments or tanks, in which intense mechanical aeration is used to completely mix the wastes, enhance biological activity, and (A) the units employs a minimum of 6 hp per million gallons of treatment volume; and either (B) the hydraulic retention time of the unit is no longer than 5 days; or (C) the hydraulic retention time is no longer than 30 days and the unit does not generate a sludge that is a hazardous waste by the Toxicity Characteristic.

(ii) Generators and treatment, storage and disposal facilities have the burden of proving that their sludges are exempt from listing as F037 and F038 wastes under this definition. Generators and treatment, storage and disposal facilities must maintain, in their operating or other onsite records, documents and data sufficient to prove that:

(A) the unit is an aggressive biological treatment unit as defined in this subsection; and

(B) the sludges sought to be exempted from the definitions of F037 and/or F038 were actually

generated in the aggressive biological treatment unit. (10/01)

(3)(i) For the purposes of the F037 listing, sludges are considered to be generated at the moment of deposition in the unit, where deposition is defined as at least a temporary cessation of lateral particle movement.

(ii) For the purposes of the F038 listing,

(A) sludges are considered to be generated at the moment of deposition in the unit, where deposition is defined as at least a temporary cessation of lateral particle movement and

(B) floats are considered to be generated at the moment they are formed in the top of the unit.

261.32 Hazardous wastes from specific sources

(a) The following solid wastes are listed hazardous wastes from specific sources unless they are excluded under 260.20 and 260.22 and listed in Appendix IX. (12/92, 5/96, 9/98, 9/01, 2/07)

Industry, SC & EPA HW #	261.32 Hazardous Wastes from specific sources - Hazardous waste	Hazard code
Wood preservation:		
K001	Bottom sediment sludge from the treatment of wastewaters from wood preserving processes that use creosote and/or pentachlorophenol.	(T)
Inorganic pigments:		
K002	Wastewater treatment sludge from the production of chrome yellow and orange pigments.	(T)
K003	Wastewater treatment sludge from the production of molybdate orange pigments.	(T)

K004	Wastewater treatment sludge from the production of zinc yellow pigments.	(T)
K005	Wastewater treatment sludge from the production of chrome green pigments.	(T)
K006	Wastewater treatment sludge from the production of chrome oxide green pigments (anhydrous and hydrated).	(T)
K007	Wastewater treatment sludge from the production of iron blue pigments.	(T)
K008	Oven residue from the production of chrome oxide green pigments.	(T)
Organic chemicals:		
K009	Distillation bottoms from the production of acetaldehyde from ethylene.	(T)
K010	Distillation side cuts from the production of acetaldehyde from ethylene.	(T)
K011	Bottom stream from the wastewater stripper in the production of acrylonitrile.	(R, T)
K013	Bottom stream from the acetonitrile column in the production of acrylonitrile.	(R, T)
K014	Bottoms from the acetonitrile purification column in the production of acrylonitrile.	(T)
K015	Still bottoms from the distillation of benzyl chloride.	(T)
K016	Heavy ends or distillation residues from the production of carbon tetrachloride.	(T)
K017	Heavy ends (still bottoms) from the purification column in the production of epichlorohydrin.	(T)
K018	Heavy ends from the fractionation column in ethyl chloride production.	(T)
K019	Heavy ends from the distillation of ethylene dichloride in ethylene dichloride production.	(T)
K020	Heavy ends from the distillation of vinyl chloride in vinyl chloride monomer production.	(T)
K021	Aqueous spent antimony catalyst waste from fluoromethanes production.	(T)
K022	Distillation bottom tars from the production of phenol/acetone from cumene.	(T)
K023	Distillation light ends from the production of phthalic anhydride from naphthalene.	(T)
K024	Distillation bottoms from the production of phthalic anhydride from naphthalene.	(T)
K025	Distillation bottoms from the production of nitrobenzene by the nitration of benzene.	(T)
K026	Stripping still tails from the production of methy ethyl pyridines.	(T)
K027	Centrifuge and distillation residues from toluene diisocyanate production.	(R, T)
K028	Spent catalyst from the hydrochlorinator reactor in the production of 1,1,1-trichloroethane.	(T)
K029	Waste from the product steam stripper in the production of 1,1,1-trichloroethane.	(T)
K030	Column bottoms or heavy ends from the combined production of trichloroethylene and perchloroethylene.	(T)
K083	Distillation bottoms from aniline production.	(T)
K085	Distillation or fractionation column bottoms from the production of chlorobenzenes.	(T)
K093	Distillation light ends from the production of phthalic anhydride from ortho-xylene.	(T)
K094	Distillation bottoms from the production of phthalic anhydride from ortho-xylene.	(T)
K095	Distillation bottoms from the production of 1,1,1-trichloroethane.	(T)
K096	Heavy ends from the heavy ends column from the production of 1,1,1-trichloroethane.	(T)
K103	Process residues from aniline extraction from the production of aniline.	(T)

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K104	Combined wastewater streams generated from nitrobenzene/aniline production.	(T)
K105	Separated aqueous stream from the reactor product washing step in the production of chlorobenzenes.	(T)
K107	Column bottoms from product separation from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazines.	(C, T)
K108	Condensed column overheads from product separation and condensed reactor vent gases from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides.	(I, T)
K109	Spent filter cartridges from product purification from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides.	(T)
K110	Condensed column overheads from intermediate separation from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides.	(T)
K111	Product washwaters from the production of dinitrotoluene via nitration of toluene.	(C, T)
K112	Reaction by-product water from the drying column in the production of toluenediamine via hydrogenation of dinitrotoluene.	(T)
K113	Condensed liquid light ends from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene.	(T)
K114	Vicinals from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene.	(T)
K115	Heavy ends from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene.	(T)
K116	Organic condensate from the solvent recovery column in the production of toluene diisocyanate via phosgenation of toluenediamine.	(T)
K117	Wastewater from the reactor vent gas scrubber in the production of ethylene dibromide via bromination of ethene.	(T)
K118	Spent adsorbent solids from purification of ethylene dibromide in the production of ethylene dibromide via bromination of ethene.	(T)
K136	Still bottoms from the purification of ethylene dibromide in the production of ethylene dibromide via bromination of ethene.	(T)
K149	Distillation bottoms from the production of alpha- (or methyl-) chlorinated toluenes, ring-chlorinated toluenes, benzoyl chlorides, and compounds with mixtures of these functional groups. (This waste does not include still bottoms from the distillation of benzyl chloride.).	(T)
K150	Organic residuals, excluding spent carbon adsorbent, from the spent chlorine gas and hydrochloric acid recovery processes associated with the production of alpha- (or methyl-) chlorinated toluenes, ring-chlorinated toluenes, benzoyl chlorides, and compounds with mixtures of these functional groups.	(T)
K151	Wastewater treatment sludges, excluding neutralization and biological sludges, generated during the treatment of wastewaters from the production of alpha- (or methyl-) chlorinated toluenes, ring-chlorinated toluenes, benzoyl chlorides, and compounds with mixtures of these functional groups.	(T)

K156	Organic waste (including heavy ends, still bottoms, light ends, spent solvents, filtrates, and decantates) from the production of carbamates and carbamoyl oximes. (This listing does not apply to wastes generated from the manufacture of 3-iodo-2-propynyl n-butylcarbamate.).	(T)
K157	Wastewaters (including scrubber waters, condenser waters, washwaters, and separation waters) from the production of carbamates and carbamoyl oximes. (This listing does not apply to wastes generated from the manufacture of 3-iodo-2-propynyl n-butylcarbamate.).	(T)
K158	Bag house dusts and filter/separation solids from the production of carbamates and carbamoyl oximes. (This listing does not apply to wastes generated from the manufacture of 3-iodo-2-propynyl n-butylcarbamate.).	(T)
K159	Organics from the treatment of thiocarbamate wastes	(T)
K161	Purification solids (including filtration, evaporation, and centrifugation solids), bag house dust and floor sweepings from the production of dithiocarbamate acids and their salts. (This listing does not include K125 or K126.).	(R, T)
K174	Wastewater treatment sludges from the production of ethylene dichloride or vinyl chloride monomer (including sludges that result from commingled ethylene dichloride or vinyl chloride monomer wastewater and other wastewater), unless the sludges meet the following conditions: (i) they are disposed of in a subtitle C or non-hazardous landfill licensed or permitted by the state or federal government; (ii) they are not otherwise placed on the land prior to final disposal; and (iii) the generator maintains documentation demonstrating that the waste was either disposed of in an on-site landfill or consigned to a transporter or disposal facility that provided a written commitment to dispose of the waste in an off-site landfill. Respondents in any action brought to enforce the requirements of subtitle C must, upon a showing by the government that the respondent managed wastewater treatment sludges from the production of vinyl chloride monomer or ethylene dichloride, demonstrate that they meet the terms of the exclusion set forth above. In doing so, they must provide appropriate documentation (e.g., contracts between the generator and the landfill owner/operator, invoices documenting delivery of waste to landfill, etc.) that the terms of the exclusion were met. (6/02)	(T)
K175	Wastewater treatment sludges from the production of vinyl chloride monomer using mercuric chloride catalyst in an acetylene-based process. (6/02)	(T)

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K181	Nonwastewaters from the production of dyes and/or pigments (including nonwastewaters commingled at the point of generation with nonwastewaters from other processes) that, at the point of generation, contain mass loadings of any of the constituents identified in paragraph (c) of this section that are equal to or greater than the corresponding paragraph (c) levels, as determined on a calendar year basis. These wastes will not be hazardous if the nonwastewaters are: (i) disposed in a Subtitle D landfill unit subject to the design criteria in R 61-107.258.40, (ii) disposed in a Subtitle C landfill unit subject to either 264.301 or 265.301, (iii) disposed in other Subtitle D landfill units that meet the design criteria in R. 61-107.258.40, 264.301, or 265.301, or (iv) treated in a combustion unit that is permitted under Subtitle C, or an onsite combustion unit that is permitted under the Clean Air Act. For the purposes of this listing, dyes and/or pigments production is defined in paragraph (b)(1) of this section. Paragraph (d) of this section describes the process for demonstrating that a facility's nonwastewaters are not K181. This listing does not apply to wastes that are otherwise identified as hazardous under 261.21-261.24 and 261.31-261.33 at the point of generation. Also, the listing does not apply to wastes generated before any annual mass loading limit is met. (2/07)	(T)
Inorganic chemicals:		
K071	Brine purification muds from the mercury cell process in chlorine production, where separately prepurified brine is not used.	(T)
K073	Chlorinated hydrocarbon waste from the purification step of the diaphragm cell process using graphite anodes in chlorine production.	(T)
K106	Wastewater treatment sludge from the mercury cell process in chlorine production.	(T)
K176	Baghouse filters from the production of antimony oxide, including filters from the production of intermediates (e.g., antimony metal or crude antimony oxide). (6/03)	(E)
K177	Slag from the production of antimony oxide that is speculatively accumulated or disposed, including slag from the production of intermediates (e.g., antimony metal or crude antimony oxide). (6/03)	(T)
K178	Residues from manufacturing and manufacturing site storage of ferric chloride from acids formed during the production of titanium dioxide using the chloride-ilmenite process. (6/03)	(T)
Pesticides:		
K031	By-product salts generated in the production of MSMA and cacodylic acid.	(T)
K032	Wastewater treatment sludge from the production of chlordane.	(T)
K033	Wastewater and scrub water from the chlorination of cyclopentadiene in the production of chlordane.	(T)
K034	Filter solids from the filtration of hexachlorocyclopentadiene in the production of chlordane.	(T)
K035	Wastewater treatment sludges generated in the production of creosote.	(T)
K036	Still bottoms from toluene reclamation distillation in the production of disulfoton.	(T)
K037	Wastewater treatment sludges from the production of disulfoton.	(T)

K038	Wastewater from the washing and stripping of phorate production.	(T)
K039	Filter cake from the filtration of diethylphosphorodithioic acid in the production of phorate.	(T)
K040	Wastewater treatment sludge from the production of phorate.	(T)
K041	Wastewater treatment sludge from the production of toxaphene.	(T)
K042	Heavy ends or distillation residues from the distillation of tetrachlorobenzene in the production of 2,4,5-T.	(T)
K043	2,6-Dichlorophenol waste from the production of 2,4-D.	(T)
K097	Vacuum stripper discharge from the chlordane chlorinator in the production of chlordane.	(T)
K098	Untreated process wastewater from the production of toxaphene.	(T)
K099	Untreated wastewater from the production of 2,4-D.	(T)
K123	Process wastewater (including supernates, filtrates, and washwaters) from the production of ethylenebisdithiocarbamic acid and its salt.	(T)
K124	Reactor vent scrubber water from the production of ethylenebisdithiocarbamic acid and its salts.	(C, T)
K125	Filtration, evaporation, and centrifugation solids from the production of ethylenebisdithiocarbamic acid and its salts.	(T)
K126	Baghouse dust and floor sweepings in milling and packaging operations from the production or formulation of ethylenebisdithiocarbamic acid and its salts.	(T)
K131	Wastewater from the reactor and spent sulfuric acid from the acid dryer from the production of methyl bromide.	(C, T)
K132	Spent absorbent and wastewater separator solids from the production of methyl bromide.	(T)
Explosives:		
K044	Wastewater treatment sludges from the manufacturing and processing of explosives.	(R)
K045	Spent carbon from the treatment of wastewater containing explosives.	(R)
K046	Wastewater treatment sludges from the manufacturing, formulation and loading of lead-based initiating compounds.	(T)
K047	Pink/red water from TNT operations.	(R)
Petroleum refining:		
K048	Dissolved air flotation (DAF) float from the petroleum refining industry.	(T)
K049	Slop oil emulsion solids from the petroleum refining industry.	(T)
K050	Heat exchanger bundle cleaning sludge from the petroleum refining industry.	(T)
K051	API separator sludge from the petroleum refining industry.	(T)
K052	Tank bottoms (lead) from the petroleum refining industry.	(T)
K169	Crude oil storage tank sediment from petroleum refining operations (8/00)	(T)
K170	Clarified slurry oil tank sediment and/or in-line filter/separation solids from petroleum refining operations (8/00)	(T)
K171	Spent Hydrotreating catalyst from petroleum refining operations, including guard beds used to desulfurize feeds to other catalytic reactors (this listing does not include inert support media)	(I, T)

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K172	Spent Hydrotreating catalyst from petroleum refining operations, including guard beds used to desulfurize feeds to other catalytic reactors (this listing does not include inert support media.) (8/00)	(I, T)
Iron and Steel		
K061	Emission control dust/sludge from the primary production of steel in electric furnaces.	(T)
K062	Spent pickle liquor generated by steel finishing operations of facilities within the iron and steel industry (SIC Codes 331 and 332).	(C, T)
Primary aluminum:		
K088	Spent potliners from primary aluminum reduction.	(T)
Secondary lead:		
K069	Emission control dust/sludge from secondary lead smelting. (Note: This listing is stayed administratively for sludge generated from secondary acid scrubber systems. The stay will remain in effect until further administrative action is taken. If EPA takes further action effecting this stay, EPA will publish a notice of the action in the Federal Register).	(T)
K100	Waste leaching solution from acid leaching of emission control dust/sludge from secondary lead smelting.	(T)
Veterinary pharmaceuticals:		
K084	Wastewater treatment sludges generated during the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds.	(T)
K101	Distillation tar residues from the distillation of aniline-based compounds in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds.	(T)
K102	Residue from the use of activated carbon for decolorization in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds.	(T)
Ink formulation:		
K086	Solvent washes and sludges, caustic washes and sludges, or water washes and sludges from cleaning tubs and equipment used in the formulation of ink from pigments, driers, soaps, and stabilizers containing chromium and lead.	(T)
Coking:		
K060	Ammonia still lime sludge from coking operations.	(T)
K087	Decanter tank tar sludge from coking operations(6/95).	(T)
K141	Process residues from the recovery of coal tar, including, but not limited to, collecting sump residues from the production of coke from coal or the recovery of coke by-products produced from coal. This listing does not include K087 (decanter tank tar sludges from coking operations).	(T)
K142	Tar storage tank residues from the production of coke from coal or from the recovery of coke by-products produced from coal.	(T)
K143	Process residues from the recovery of light oil, including, but not limited to, those generated in stills, decanters, and wash oil recovery units from the recovery of coke by-products produced from coal.	(T)

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K144	Wastewater sump residues from light oil refining, including, but not limited to, intercepting or contamination sump sludges from the recovery of coke by-products produced from coal.	(T)
K145	Residues from naphthalene collection and recovery operations from the recovery of coke by-products produced from coal.	(T)
K147	Tar storage tank residues from coal tar refining.	(T)
K148	Residues from coal tar distillation, including but not limited to, still bottoms.	(T)

Organotins:		
K900	Waste residues from the manufacture of organotin compounds which contain tri-(organo) substituted tin compounds, to include tributyltin and its analogs. (5/02)	(T)

(b) Listing Specific Definitions:

(1) For the purposes of the K181 listing, dyes and/or pigments production is defined to include manufacture of the following product classes: dyes, pigments, or FDA certified colors that are classified as azo, triarylmethane, perylene or anthraquinone classes. Azo products include azo, monoazo, diazo, triazo, polyazo, azoic, benzidine, and pyrazolone products. Triarylmethane products include both triarylmethane

and triphenylmethane products. Wastes that are not generated at a dyes and/or pigments manufacturing site, such as wastes from the offsite use, formulation, and packaging of dyes and/or pigments, are not included in the K181 listing. (2/07)

(c) K181 Listing Levels. Nonwastewaters containing constituents in amounts equal to or exceeding the following levels during any calendar year are subject to the K181 listing, unless the conditions in the K181 listing are met. (2/07)

261.32 (c) Constituent	Chemical abstracts No.	Mass levels (kg/yr)
Aniline	62-53-3	9,300
o-Anisidine	90-04-0	110
4-Chloroaniline	106-47-8	4,800
p-Cresidine	120-71-8	660
2,4-Dimethylaniline	95-68-1	100
1,2-Phenylenediamine	95-54-5	710
1,3-Phenylenediamine	108-45-2	1,200

(d) Procedures for demonstrating that dyes and/or pigment nonwastewaters are not K181. The procedures described in paragraphs (d)(1)-(d)(3) and (d)(5) of this section establish when nonwastewaters from the production of dyes/pigments would not be hazardous (these procedures apply to wastes that are not disposed in landfill units or treated in combustion units as specified in paragraph (a) of this section). If the nonwastewaters are disposed in landfill units or treated in combustion units as described in paragraph (a) of this section, then the nonwastewaters are not hazardous. In order to demonstrate that it is meeting the landfill disposal or combustion conditions contained in the K181 listing description, the generator must maintain documentation as described in paragraph (d)(4) of this section.

(1) Determination based on no K181 constituents. Generators that have knowledge (e.g., knowledge of constituents in wastes based on prior sampling and analysis data and/or information about raw materials used, production processes used, and reaction and degradation products formed) that their wastes contain none of the K181 constituents (see paragraph (c) of this section) can use their knowledge to determine that their waste is not K181. The generator

must document the basis for all such determinations on an annual basis and keep each annual documentation for three years.

(2) Determination for generated quantities of 1,000 MT/yr or less for wastes that contain K181 constituents. If the total annual quantity of dyes and/or pigment nonwastewaters generated is 1,000 metric tons or less, the generator can use knowledge of the wastes (e.g., knowledge of constituents in wastes based on prior analytical data and/or information about raw materials used, production processes used, and reaction and degradation products formed) to conclude that annual mass loadings for the K181 constituents are below the listing levels of paragraph (c) of this section. To make this determination, the generator must:

(i) Each year document the basis for determining that the annual quantity of nonwastewaters expected to be generated will be less than 1,000 metric tons.

(ii) Track the actual quantity of nonwastewaters generated from January 1 through December 31 of each year. If, at any time within the year, the actual waste quantity exceeds 1,000 metric tons, the generator must comply with the

requirements of paragraph (d)(3) of this section for the remainder of the year.

(iii) Keep a running total of the K181 constituent mass loadings over the course of the calendar year.

(iv) Keep the following records on site for the three most recent calendar years in which the hazardous waste determinations are made:

(A) The quantity of dyes and/or pigment nonwastewaters generated.

(B) The relevant process information used.

(C) The calculations performed to determine annual total mass loadings for each K181 constituent in the nonwastewaters during the year.

(3) Determination for generated quantities greater than 1,000 MT/yr for wastes that contain K181 constituents. If the total annual quantity of dyes and/or pigment nonwastewaters generated is greater than 1,000 metric tons, the generator must perform all of the steps described in paragraphs (d)(3)(i)-(d)(3)(xi) of this section in order to make a determination that its waste is not K181.

(i) Determine which K181 constituents (see paragraph (c) of this section) are reasonably expected to be present in the wastes based on knowledge of the wastes (e.g., based on prior sampling and analysis data and/or information about raw materials used, production processes used, and reaction and degradation products formed).

(ii) If 1,2-phenylenediamine is present in the wastes, the generator can use either knowledge or sampling and analysis procedures to determine the level of this constituent in the wastes. For determinations based on use of knowledge, the generator must comply with the procedures for using knowledge described in paragraph (d)(2) of this section and keep the records described in paragraph (d)(2)(iv) of this section. For determinations based on sampling and analysis, the generator must comply with the sampling and analysis and recordkeeping requirements described below in this section.

(iii) Develop a waste sampling and analysis plan (or modify an existing plan) to collect and analyze representative waste samples for the K181 constituents reasonably expected to be present in the wastes. At a minimum, the plan must include:

(A) A discussion of the number of samples needed to characterize the wastes fully;

(B) The planned sample collection method to obtain representative waste samples;

(C) A discussion of how the sampling plan accounts for potential temporal and spatial variability of the wastes.

(D) A detailed description of the test methods to be used, including sample preparation, clean up (if necessary), and determinative methods.

(iv) Collect and analyze samples in accordance with the waste sampling and analysis plan.

(A) The sampling and analysis must be unbiased, precise, and representative of the wastes.

(B) The analytical measurements must be sufficiently sensitive, accurate and precise to support any claim that the constituent mass loadings are below the listing levels of paragraph (c) of this section.

(v) Record the analytical results.

(vi) Record the waste quantity represented by the sampling and analysis results.

(vii) Calculate constituent-specific mass loadings (product of concentrations and waste quantity).

(viii) Keep a running total of the K181 constituent mass loadings over the course of the calendar year.

(ix) Determine whether the mass of any of the K181 constituents listed in paragraph (c) of this section generated between January 1 and December 31 of any year is below the K181 listing levels.

(x) Keep the following records on site for the three most recent calendar years in which the hazardous waste determinations are made:

(A) The sampling and analysis plan.

(B) The sampling and analysis results (including QA/QC data)

(C) The quantity of dyes and/or pigment nonwastewaters generated.

(D) The calculations performed to determine annual mass loadings.

(xi) Nonhazardous waste determinations must be conducted annually to verify that the wastes remain nonhazardous.

(A) The annual testing requirements are suspended after three consecutive successful annual demonstrations that the wastes are nonhazardous. The generator can then use knowledge of the wastes to support subsequent annual determinations.

(B) The annual testing requirements are reinstated if the manufacturing or waste treatment processes generating the wastes are significantly altered, resulting in an increase of the potential for the wastes to exceed the listing levels.

(C) If the annual testing requirements are suspended, the generator must keep records of the process knowledge information used to support a nonhazardous determination. If testing is reinstated, a description of the process change must be retained.

(4) Recordkeeping for the landfill disposal and combustion exemptions. For the purposes of meeting the landfill disposal and combustion condition set out in the K181 listing description, the generator must maintain on site for three years documentation demonstrating that each shipment of waste was

261.33 Discarded commercial chemical products, off-specification species, container residues, and spill residues thereof (11/90)
received by a landfill unit that is subject to or meets the landfill design standards set out in the listing description, or was treated in combustion units as specified in the listing description.

(5) Waste holding and handling. During the interim period, from the point of generation to completion of the hazardous waste determination, the generator is responsible for storing the wastes appropriately. If the wastes are determined to be hazardous and the generator has not complied with the subtitle C requirements during the interim period, the generator could be subject to an enforcement action for improper management. (2/07)

261.33 Discarded commercial chemical products, off-specification species, container residues, and spill residues thereof (11/90)

The following materials or items are hazardous wastes if and when they are discarded or intended to be discarded as described in section 261.2(a)(2)(i), when they are mixed with waste oil or used oil or other material and applied to the land for dust suppression or road treatment, when they are otherwise applied to the land in lieu of their original intended use or when they are contained in products that are applied to the land in lieu of their original intended use, or when, in lieu of their original intended use, they are produced for use as (or as a component of) a fuel, distributed for use as a fuel, or burned as a fuel.

(a) Any commercial chemical product, or manufacturing chemical intermediate having the generic name listed in paragraph (e) or (f) of this section.

(b) Any off-specification commercial chemical product or manufacturing chemical intermediate which, if it met specifications, would have the generic name listed in paragraph (e) or (f) of this section. (12/92)

(c) Any residue remaining in a container or in an inner liner removed from a container that has held any commercial chemical product or manufacturing chemical intermediate having the generic name listed in paragraph (e) or (f) of this section, unless the container is empty as defined in Section 261.7(b). (12/92).

[Comment: Unless the residue is being beneficially used or reused, or legitimately recycled or reclaimed; or being accumulated, stored, transported or treated prior to such use, reuse, recycling or reclamation, the Department considers the residue to be intended for discard, and thus, a hazardous waste. An example of a legitimate reuse of the residue would be where the residue remains in the container and the container is

used to hold the same commercial chemical product or manufacturing chemical intermediate it previously held. An example of the discard of the residue would be where the drum is sent to a drum reconditioner who reconditions the drum but discards the residue (12/92).]

(d) Any residue or contaminated soil, water or other debris resulting from the cleanup of a spill into or on any land or water of any commercial chemical product or manufacturing chemical intermediate having the generic name listed in paragraph (e) or (f) of this section, or any residue or contaminated soil, water or other debris resulting from the cleanup of a spill, into or on any land or water, of any off-specification chemical product and manufacturing chemical intermediate which, if it met specifications, would have the generic name listed in paragraph (e) or (f) of this section.

[Comment: The phrase "commercial chemical product or manufacturing chemical intermediate having the generic name listed in . . ." refers to a chemical substance which is manufactured or formulated for commercial or manufacturing use which consists of the commercially pure grade of the chemical, any technical grades of the chemical that are produced or marketed, and all formulations in which the chemical is the sole active ingredient. It does not refer to a material, such as a manufacturing process waste, that contains any of the substances listed in paragraph (e) or (f). Where a manufacturing process waste is deemed to be a hazardous waste because it contains a substance listed in paragraph (e) or (f), such waste will be listed in either sections 261.31 or 261.32 or will be identified as a hazardous waste by the characteristics set forth in subpart C of this part. (12/92)].

(e) The commercial chemical products, manufacturing chemical intermediates or off-specification commercial chemical products or manufacturing chemical intermediates referred to in paragraphs (a) through (d) of this section, are identified as acute hazardous wastes (H) and are subject to the small quantity exclusion defined in section 261.5(e).

[Comment: For the convenience of the regulated community the primary hazardous properties of these materials have been indicated by the letters T (Toxicity), and R (Reactivity). Absence of a letter indicates that the compound only is listed for acute toxicity. Wastes are first listed in alphabetical order by substance and then listed again in numerical order by Hazardous Waste Number. (12/92, 12/93).]

These wastes and their corresponding EPA Hazardous Waste Numbers are:

HW #	Chemical abstracts #	261.33(e) Lists of Acute Hazardous Wastes Substance (11/90, 12/92, 5/96)
P023	107-20-0	Acetaldehyde, chloro-
P002	591-08-2	Acetamide, N-(aminothioxomethyl)-
P057	640-19-7	Acetamide, 2-fluoro-
P058	62-74-8	Acetic acid, fluoro-, sodium salt
P002	591-08-2	1-Acetyl-2-thiourea
P003	107-02-8	Acrolein
P070	116-06-3	Aldicarb
P203	1646-88-4	Aldicarb sulfone.(5/96)
P004	309-00-2	Aldrin
P005	107-18-6	Allyl alcohol
P006	20859-73-8	Aluminum phosphide (R,T)
P007	2763-96-4	5-(Aminomethyl)-3-isoxazolol
P008	504-24-5	4-Aminopyridine
P009	131-74-8	Ammonium picrate (R)
P119	7803-55-6	Ammonium vanadate
P099	506-61-6	Argentate(1-), bis(cyano-C-), potassium
P010	7778-39-4	Arsenic acid H ₃ AsO ₄
P012	1327-53-3	Arsenic oxide As ₂ O ₃
P011	1303-28-2	Arsenic oxide As ₂ O ₅
P011	1303-28-2	Arsenic pentoxide
P012	1327-53-3	Arsenic trioxide
P038	692-42-2	Arsine, diethyl-
P036	696-28-6	Arsonous dichloride, phenyl-
P054	151-56-4	Aziridine
P067	75-55-8	Aziridine, 2-methyl-
P013	542-62-1	Barium cyanide
P024	106-47-8	Benzenamine, 4-chloro-
P077	100-01-6	Benzenamine, 4-nitro-
P028	100-44-7	Benzene, (chloromethyl)
P042	51-43-4	1,2-Benzenediol, 4-[1-hydroxy-2-(methylamino)ethyl-], (R)
P046	122-09-8	Benzenethanamine, alpha, alpha-dimethyl-
P014	108-98-5	Benzenethiol
P127	1563-66-2	7-Benzofuranol, 2,3-dihydro-2,2-dimethyl-, methylcarbamate.(5/96)
P188	57-64-7	Benzoic acid, 2-hydroxy-, compd. with (3aS-cis)-1,2,3,3a,8,8a-hexahydro-1, 3a,8-trimethylpyrrolo[2,3-b]indol-5-yl methylcarbamate ester (1:1). (5/96)
P001	181-81-2	2H-1-Benzopyran-2-one, 4-hydroxy-3-(3-oxo-1-phenylbutyl)-, & salts, when present at concentrations greater than 0.3%
P028	100-44-7	Benzyl chloride
P015	7440-41-7	Beryllium powder
P017	598-31-2	Bromoacetone
P018	357-57-3	Brucine
P045	39196-18-4	2-Butanone, 3,3-dimethyl-1-(methylthio)- O-[(methylamino)carbonyl]oxime
P021	592-01-8	Calcium cyanide
P021	592-01-8	Calcium cyanide Ca(CN) ₂
P022	75-15-0	Carbon disulfide
P189	55285-14-8	Carbamic acid, [(dibutylamino)- thio]methyl-, 2,3-dihydro-2,2-dimethyl- 7-benzofuranyl ester (5/96)
P191	644-64-4	Carbamic acid, dimethyl-, 1-[(dimethyl-amino)carbonyl]- 5-methyl-1H- pyrazol-3-yl ester. (5/96)
P192	119-38-0	Carbamic acid, dimethyl-, 3-methyl-1- (1-methylethyl)-1H- pyrazol-5-yl ester.(5/96)
P190	1129-41-5	Carbamic acid, methyl-, 3-methylphenyl ester. (5/96)
P127	1563-66-2	Carbofuran. (5/96)
P095	75-44-5	Carbonic dichloride
P189	55285-14-8	Carbosulfan. (5/96)
P023	107-20-0	Chloroacetaldehyde
P024	106-47-8	p-Chloroaniline
P026	5344-82-1	1-(o-Chlorophenyl)thiourea
P027	542-76-7	3-Chloropropionitrile
P029	544-92-3	Copper cyanide
P029	544-92-3	Copper cyanide Cu(CN)
P202	64-00-6	m-Cumenyl methylcarbamate.(5/96)
P030		Cyanides (soluble cyanide salts), not otherwise specified
P031	460-19-5	Cyanogen
P033	506-77-4	Cyanogen chloride
P033	506-77-4	Cyanogen chloride (CN)Cl
P034	131-89-5	2-Cyclohexyl-4,6-dinitrophenol

HW #	Chemical abstracts #	261.33(e) Lists of Acute Hazardous Wastes Substance (11/90, 12/92, 5/96)
P016	542-88-1	Dichloromethyl ether
P036	696-28-6	Dichlorophenylarsine
P037	60-57-1	Dieldrin
P038	692-42-2	Diethylarsine
P041	311-45-5	Diethyl-p-nitrophenyl phosphate
P040	297-97-2	O,O-Diethyl O-pyrazinyl phosphorothioate
P043	55-91-4	Diisopropylfluorophosphate (DFP)
P004	309-00-2	1,4,5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexa- chloro-1,4,4a,5,8,8a-, hexahydro-, (1alpha,4alpha,4abeta,5alpha,8alpha,8abeta)-
P060	465-73-6	1,4,5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexa- chloro-1,4,4a,5,8,8a-hexahydro-, (1alpha,4alpha,4abeta,5beta,8beta,8abeta)-
P037	60-57-1	2,7:3,6-Dimethanonaphth[2,3-b]oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6, 6a,7,7a-octahydro-, (1alpha,2beta,2alpha,3beta,6beta,6aalpha, 7beta,7aalpha)-
P051	172-20-8	2,7:3,6-Dimethanonaphth [2,3-b]oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6, 6a,7,7a-octahydro-, (1aalpha,2beta,2abeta,3alpha,6alpha,6abeta, 7beta,7aalpha)-, & metabolites
P044	60-51-5	Dimethoate
P191	644-64-4	Dimetilan. (5/96)
P046	122-09-8	alpha,alpha-Dimethylphenethylamine
P047	1534-52-1	4,6-Dinitro-o-cresol, & salts
P048	51-28-5	2,4-Dinitrophenol
P020	88-85-7	Dinoseb
P085	152-16-9	Diphosphoramidate, octamethyl-
P111	107-49-3	Diphosphoric acid, tetraethyl ester
P039	298-04-4	Disulfoton
P049	541-53-7	Dithiobiuret
P185	26419-73-8	1,3-Dithiolane-2-carboxaldehyde, 2,4-dimethyl-, O- [(methylamino)- carbonyl]oxime. (5/96)
P050	115-29-7	Endosulfan
P088	145-73-3	Endothall
P051	72-20-8	Endrin
P051	72-20-8	Endrin, & metabolites
P042	51-43-4	Epinephrine
P031	460-19-5	Ethanedinitrile
P194	23135-22-0	Ethanimidothioic acid, 2- (dimethylamino)-N-[[[(methylamino)carbonyl]oxy]-2-oxo-, methyl ester.(5/96)
P066	16752-77-5	Ethanimidothioic acid, N-[[[(methylamino)carbonyl]oxy]-, methyl ester
P101	107-12-0	Ethyl cyanide
P054	151-56-4	Ethyleneimine
P097	52-85-7	Famphur
P056	7782-41-4	Fluorine
P057	640-19-7	Fluoroacetamide
P198	23422-53-9	Formetanate hydrochloride. (5/96)
P197	17702-57-7	Formparanate. (5/96)
P058	62-74-8	Fluoroacetic acid, sodium salt
P065	628-86-4	Fulminic acid, mercury(2+) salt (R,T)
P059	76-44-8	Heptachlor
P062	757-58-4	Hexaethyl tetraphosphate
P116	79-19-6	Hydrazinecarbothioamide
P068	60-34-4	Hydrazine, methyl-
P063	74-90-8	Hydrocyanic acid
P063	74-90-8	Hydrogen cyanide
P096	7803-51-2	Hydrogen phosphide
P060	465-73-6	Isodrin
P192	119-38-0	Isolan. (5/96)
P202	64-00-6	3-Isopropylphenyl N-methylcarbamate.(5/96)
P007	2763-96-4	3(2H)-Isoxazolone, 5-(aminomethyl)-
P196	15339-36-3	Manganese, bis(dimethylcarbamodithioato-S,S')-, (5/96)
P196	15339-36-3	Manganese dimethyldithiocarbamate. (5/96)
P092	62-38-4	Mercury, (acetato-O)phenyl-
P065	628-86-4	Mercury fulminate (R,T)
P082	62-75-9	Methanamine, N-methyl-N-nitroso-
P064	624-83-9	Methane, isocyanato-
P016	542-88-1	Methane, oxybis[chloro-
P112	509-14-8	Methane, tetranitro- (R)
P198	23422-53-9	Methanimidamide, N,N-dimethyl-N'-[3-[[[(methylamino)-carbonyl]oxy]phenyl]-, monohydrochloride (5/96)
P197	17702-57-7	Methanimidamide, N,N-dimethyl-N'-[2-methyl-4-[[[(methylamino)carbonyl] oxy]phenyl]- (5/96)
P199	2032-65-7	Methiocarb. (5/96)

HW #	Chemical abstracts #	261.33(e) Lists of Acute Hazardous Wastes Substance (11/90, 12/92, 5/96)
P118	75-70-7	Methanethiol, trichloro-
P050	115-29-7	6,9-Methano-2,4,3-benzodioxathiepin, 6,7,8,9,10,10- hexachloro-1,5,5a,6, 9,9a-hexahydro-,3-oxide
P059	76-44-8	4,7-Methano-1H-indene, 1,4,5,6,7,8,8-heptachloro-3a,4,7,7a-tetrahydro-
P066	16752-77-5	Methomyl
P068	60-34-4	Methyl hydrazine
P064	624-83-9	Methyl isocyanate
P069	75-86-5	2-Methylactonitrile
P071	298-00-0	Methyl parathion
P190	1129-41-5	Metolcarb. (5/96)
P128	315-18-4	Mexacarbate. (4/96)
P072	86-88-4	alpha-Naphthylthiourea
P073	13463-39-3	Nickel carbonyl
P073	13463-39-3	Nickel carbonyl Ni(CO) ₄ , (T-4)-
P074	557-19-7	Nickel cyanide
P074	557-19-7	Nickel cyanide Ni(CN) ₂
P075	154-11-5	Nicotine, & salts
P076	10102-43-9	Nitric oxide
P077	100-01-6	p-Nitroaniline
P078	10102-44-0	Nitrogen dioxide
P076	10102-43-9	Nitrogen oxide NO
P078	10102-44-0	Nitrogen oxide NO ₂
P081	55-63-0	Nitroglycerine (R)
P082	62-75-9	N-Nitrosodimethylamine
P084	4549-40-0	N-Nitrosomethylvinylamine
P085	152-16-9	Octamethylpyrophosphoramidate
P087	20816-12-0	Osmium oxide OsO ₄ , (T-4)-
P087	20816-12-0	Osmium tetroxide
P088	145-73-3	7-Oxabicyclo[2.2.1]heptane-2,3-dicarboxylic acid
P194	23135-22-0	Oxamyl. (5/96)
P089	56-38-2	Parathion
P034	131-89-5	Phenol, 2-cyclohexyl-4,6-dinitro-
P048	51-28-5	Phenol, 2,4-dinitro
P047	1534-52-1	Phenol, 2-methyl-4,6-dinitro, & salts
P020	88-85-7	Phenol, 2-(1-methylpropyl)-4,6-dinitro-
P009	131-74-8	Phenol, 2,4,6-trinitro-, ammonium salt (R)
P128	315-18-4	Phenol, 4-(dimethylamino)-3,5-dimethyl-, methylcarbamate (ester). (5/96)
P199	2032-65-7	Phenol, (3,5-dimethyl-4-(methylthio)-, methylcarbamate (5/96)
P202	64-00-6	Phenol, 3-(1-methylethyl)-, methyl carbamate. (5/96)
P201	2631-37-0	Phenol, 3-methyl-5-(1-methylethyl)-, methyl carbamate. (5/96)
P092	62-38-4	Phenylmercury acetate
P093	103-85-5	Phenylthiourea
P094	298-02-2	Phorate
P095	75-44-5	Phosgene
P096	7803-51-2	Phosphine
P041	311-45-5	Phosphoric acid, diethyl 4-nitrophenyl ester
P039	298-04-4	Phosphorodithioic acid, O,O-diethyl S-[2-(ethylthio)ethyl]ester
P094	298-02-2	Phosphorodithioic acid, O,O-diethyl S-[(ethylthio)methyl]ester
P044	60-51-5	Phosphorodithioic acid, O,O-dimethyl S-[2-(methylamino)-2-oxoethyl] ester
P043	55-91-4	Phosphorofluoridic acid, bis(1-methylethyl) ester
P089	56-38-2	Phosphorothioic acid, O,O-diethyl O-(4-nitrophenyl) ester
P040	297-97-2	Phosphorothioic acid, O,O-diethyl O-pyrazinyl ester
P097	52-85-7	Phosphorothioic acid, O-[4-[(dimethylamino)sulfonyl]phenyl] O,Odimethyl ester
P071	298-00-0	Phosphorothioic acid, O,O,-dimethyl O-(4-nitrophenyl) ester
P204	57-47-6	Physostigmine. (5/96)
P188	57-64-7	Physostigmine salicylate. (5/96)
P110	78-00-2	Plumbane, tetraethyl-
P098	151-50-8	Potassium cyanide
P098	151-50-8	Potassium cyanide K (CN)
P099	506-61-6	Potassium silver cyanide
P201	2631-37-0	Promecarb (5/96)
P203	1646-88-4	Propanal,2-methyl-2-(methyl-sulfonyl)-,O-[(methylamino)carbonyl] oxime. (5/96)
P070	116-06-3	Propanal, 2-methyl-2-(methylthio)-, O-[(methylamino)carbonyl]oxime
P101	107-12-0	Propanenitrile
P027	542-76-7	Propanenitrile, 3-chloro-

HW #	Chemical abstracts #	261.33(e) Lists of Acute Hazardous Wastes Substance (11/90, 12/92, 5/96)
P069	75-86-5	Propanenitrile, 2-hydroxy-2-methyl
P081	55-63-0	1,2,3-Propanetriol, trinitrate (R)
P017	598-31-2	2-Propanone, 1-bromo-
P102	107-19-7	Propargyl alcohol
P003	107-02-8	2-Propenal
P005	107-18-6	2-Propen-1-ol
P067	75-55-8	1,2 Propylenimine
P102	107-19-7	2-Propyn-1-ol
P008	504-24-5	4-Pyridinamine
P075	¹ 54-11-5	Pyridine, 3-(1-methyl-2-pyrrolidinyl)- (S)-, & salts
P204	57-47-6	Pyrrolo[2,3-b]indol-5-ol, 1,2,3,3a,8,8a-hexahydro-1,3a,8-trimethyl-, methylcarbamate (ester), (3aS-cis)- (5/96)
P114	12039-52-0	Selenious acid, dithallium(1+) salt
P103	630-10-4	Selenourea
P104	506-64-9	Silver cyanide
P104	506-64-9	Silver cyanide Ag (CN)
P105	26628-22-8	Sodium azide
P106	143-33-9	Sodium cyanide
P106	143-33-9	Sodium cyanide Na (CN)
P108	¹ 57-24-9	Strychnidin-10-one, & salts
P018	357-57-3	Strychnidin-10-one, 2,3-dimethoxy-
P108	¹ 57-24-9	Strychnine, & salts
P115	7446-18-6	Sulfuric acid, dithallium(1+) salt
P109	3689-24-5	Tetraethyldithiopyrophosphate
P110	78-00-2	Tetraethyl lead
P111	107-49-3	Tetraethyl pyrophosphate
P112	509-14-8	Tetranitromethane (R)
P062	757-58-4	Tetrakisphosphoric acid, hexaethyl ester
P113	1314-32-5	Thallic oxide
P113	1314-32-5	Thallium oxide Tl ₂ O ₃
P114	12039-52-0	Thallium(I) selenite
P115	7446-18-6	Thallium(I) sulfate
P109	3689-24-5	Thiodiphosphoric acid, tetraethyl ester
P045	39196-18-4	Thiofanox
P049	541-53-7	Thioimidodicarbonic diamide [(H ₂ N)C(S)] ₂ NH
P014	108-98-5	Thiophenol
P116	79-19-6	Thiosemicarbazide
P026	5344-82-1	Thiourea, (2-chlorophenyl)-
P072	86-88-4	Thiourea, 1-naphthalenyl-
P093	103-85-5	Thiourea, phenyl-
P185	26419-73-8	Tirpate. (5/96)
P123	8001-35-2	Toxaphene
P118	75-70-7	Trichloromethanethiol
P119	7803-55-6	Vanadic acid, ammonium salt
P120	1314-62-1	Vanadium oxide V ₂ O ₅
P120	1314-62-1	Vanadium pentoxide
P084	4549-40-0	Vinylamine, N-methyl-N-nitroso-
P001	¹ 81-81-2	Warfarin, & salts, when present at concentrations greater than 0.3%
P205	137-30-4	Zinc, bis(dimethylcarbamodithioato-S,S')-, (5/96)
P121	557-21-1	Zinc cyanide
P121	557-21-1	Zinc cyanide Zn(CN) ₂
P122	1314-84-7	Zinc phosphide Zn ₃ P ₂ , when present at concentrations greater than 10% (R,T)
P205	137-30-4	Ziram. (5/96)

FOOTNOTE: ¹CAS Number given for parent compound only.

(f) The commercial chemical products, manufacturing chemical intermediates, or off-specification commercial chemical products referred to in paragraphs (a) through (d) of this section, are identified as toxic wastes (T), unless otherwise designated and are subject to the small quantity generator exclusion defined in Section 261.5 (a) and (g). (5/96)

[Comment: For the convenience of the regulated community, the primary hazardous properties of these materials have been indicated by the letters T (Toxicity), R (Reactivity), I (Ignitability) and C (Corrosivity). Absence of a letter indicates that the compound is only listed for toxicity. Wastes are first listed in alphabetical order by substance and then listed again in numerical order by Hazardous Waste Number. (12/92; 5/96).]

261.33(f) Lists of Subpart D Toxic Hazardous Wastes
These wastes and their corresponding EPA Hazardous
Waste Numbers are:

261.33(f) Lists of Subpart D Toxic Hazardous Wastes		
HW #	CAS#	Substance (11/90; 12/92; 12/93; 5/96, 9/98)
U394	30558-43-1	A2213 (5/96)
U001	75-07-0	Acetaldehyde (I)
U034	75-87-6	Acetaldehyde, trichloro-
U187	62-44-2	Acetamide, N-(4-ethoxyphenyl)-
U005	53-96-3	Acetamide, N-9H-fluoren-2-yl-
U240	¹ 94-75-7	Acetic acid, (2,4-dichlorophenoxy)-, salts & esters
U112	141-78-6	Acetic acid ethyl ester (I)
U144	301-04-2	Acetic acid, lead(2+) salt
U214	563-68-8	Acetic acid, thallium(1+) salt
see F027	93-76-5	Acetic acid, (2,4,5-trichlorophenoxy)-
U002	67-64-1	Acetone (I)
U003	75-05-8	Acetonitrile (I,T)
U004	98-86-2	Acetophenone
U005	53-96-3	2-Acetylaminofluorene
U006	75-36-5	Acetyl chloride (C,R,T)
U007	79-06-1	Acrylamide
U008	79-10-7	Acrylic acid (I)
U009	107-13-1	Acrylonitrile
U011	61-82-5	Amitrole
U012	62-53-3	Aniline (I,T)
U136	75-60-5	Arsinic acid, dimethyl-
U014	492-80-8	Auramine
U015	115-02-6	Azaserine
U010	50-07-7	Azirino[2',3':3,4]pyrrolo(1,2-a)indole-4,7- dione, 6-amino-8-[[[(aminocarbonyl)oxy]methyl]-1,1a,2,8,8a,8b-hexahydro-8a-methoxy-5-methyl-, [1aS-(1aalpha, 8beta,8aalpha,8balph)]-
U280	101-27-9	Barban. (5/96)
U278	22781-23-3	Bendiocarb. (5/96)
U364	22961-82-6	Bendiocarb phenol. (5/96)
U271	17804-35-2	Benomyl. (5/96)
U157	56-49-5	Benz[j]aceanthrylene, 1,2-dihydro-3-methyl-
U016	225-51-4	Benz[c]acridine
U017	98-87-3	Benzal chloride
U192	23950-58-5	Benzamide, 3,5-dichloro-N-(1,1-dimethyl-2- propynyl)-
U018	56-55-3	Benz[a]anthracene
U094	57-97-6	Benz[a]anthracene, 7,12-dimethyl-
U012	62-53-3	Benzenamine (I,T)
U014	492-80-8	Benzenamine, 4,4'-carbonimidoylbis[N,N- dimethyl-
U049	3165-93-3	Benzenamine, 4-chloro-2-methyl-, hydrochloride
U093	60-11-7	Benzenamine, N,N-dimethyl-4-(phenylazo)-
U328	95-53-4	Benzenamine, 2-methyl-
U353	106-49-0	Benzenamine, 4-methyl-
U158	101-14-4	Benzenamine, 4,4'-methylenebis[2-chloro-
U222	636-21-5	Benzenamine, 2-methyl-, hydrochloride
U181	99-55-8	Benzenamine, 2-methyl-5-nitro-
U019	71-43-2	Benzene (I,T)
U038	510-15-6	Benzeneacetic acid, 4-chloro-alpha-(4- chlorophenyl)-alpha-hydroxy-, ethyl ester
U030	101-55-3	Benzene, 1-bromo-4-phenoxy-
U035	305-03-3	Benzenebutanoic acid, 4-[bis(2- chloroethyl)amino]-
U037	108-90-7	Benzene, chloro-
U221	25376-45-8	Benzenediamine, ar-methyl-
U028	117-81-7	1,2-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester
U069	84-74-2	1,2-Benzenedicarboxylic acid, dibutyl ester
U088	84-66-2	1,2-Benzenedicarboxylic acid, diethyl ester
U102	131-11-3	1,2-Benzenedicarboxylic acid, dimethyl ester
U107	117-84-0	1,2-Benzenedicarboxylic acid, dioctyl ester
U070	95-50-1	Benzene, 1,2-dichloro-
U071	541-73-1	Benzene, 1,3-dichloro-
U072	106-46-7	Benzene, 1,4-dichloro-
U060	72-54-8	Benzene, 1,1'-(2,2-dichloroethylidene)bis[4-chloro-
U017	98-87-3	Benzene, (dichloromethyl)-
U223	26471-62-5	Benzene, 1,3-diisocyanatomethyl- (R,T)

261.33(f) Lists of Subpart D Toxic Hazardous Wastes		
HW #	CAS#	Substance (11/90; 12/92; 12/93; 5/96, 9/98)
U239	1330-20-7	Benzene, dimethyl- (I,T)
U201	108-46-3	1,3-Benzenediol
U127	118-74-1	Benzene, hexachloro-
U056	110-82-7	Benzene, hexahydro- (I)
U220	108-88-3	Benzene, methyl-
U105	121-14-2	Benzene, 1-methyl-2,4-dinitro-
U106	606-20-2	Benzene, 2-methyl-1,3-dinitro-
U055	98-82-8	Benzene, (1-methylethyl)- (I)
U169	98-95-3	Benzene, nitro-
U183	608-93-5	Benzene, pentachloro-
U185	82-68-8	Benzene, pentachloronitro-
U020	98-09-9	Benzenesulfonic acid chloride (C,R)
U020	98-09-9	Benzenesulfonyl chloride (C,R)
U207	95-94-3	Benzene, 1,2,4,5-tetrachloro-
U061	50-29-3	Benzene, 1,1'-(2,2,2-trichloroethylidene)bis[4- chloro-
U247	72-43-5	Benzene, 1,1'-(2,2,2-trichloroethylidene)bis[4- methoxy-
U023	98-07-7	Benzene, (trichloromethyl)-
U234	99-35-4	Benzene, 1,3,5-trinitro-
U021	92-87-5	Benzidine
U202	¹ 81-07-2	1,2-Benzisothiazol-3(2H)-one, 1,1-dioxide, & salts
U278	22781-23-3	1,3-Benzodioxol-4ol, 2,2dimethyl, methyl carbamate. (5/96)
U364	22961-82-6	1,3-Benzodioxol4ol, 2,2dimethyl,
U203	94-59-7	1,3-Benzodioxole, 5-(2-propenyl)-
U141	120-58-1	1,3-Benzodioxole, 5-(1-propenyl)-
U367	1563-38-8	7Benzofuranol, 2,3-dihydro2,2-dimethyl (5/96)
U090	94-58-6	1,3-Benzodioxole, 5-propyl-
U064	189-55-9	Benzo[rs]pentaphene
U248	¹ 81-81-2	2H-1-Benzopyran-2-one, 4-hydroxy-3-(3-oxo-1-phenyl- butyl)-, & salts, when present at concentrations of 0.3% or less
U022	50-32-8	Benzo[a]pyrene
U197	106-51-4	p-Benzoquinone
U023	98-07-7	Benzotrichloride (C,R,T)
U085	1464-53-5	2,2'-Bioxirane
U021	92-87-5	[1,1'-Biphenyl]-4,4'-diamine
U073	91-94-1	[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dichloro-
U091	119-90-4	[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethoxy-
U095	119-93-7	[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethyl-
U225	75-25-2	Bromoform
U030	101-55-3	4-Bromophenyl phenyl ether
U128	87-68-3	1,3-Butadiene, 1,1,2,3,4,4-hexachloro-
U172	924-16-3	1-Butanamine, N-butyl-N-nitroso-
U031	71-36-3	1-Butanol (I)
U159	78-93-3	2-Butanone (I,T)
U160	1338-23-4	2-Butanone, peroxide (R,T)
U053	4170-30-3	2-Butenal
U074	764-41-0	2-Butene, 1,4-dichloro- (I,T)
U143	303-34-4	2-Butenoic acid, 2-methyl-, 7-[[[2,3-dihydroxy-2-(1-methoxyethyl)-3-methyl-1- oxobutoxy]methyl]- 2,3,5,7a-tetrahydro-1H- pyrrolizin-1-yl ester,... [1S-[1alpha(Z),7(2S',3R'),7aalpha]]-
U031	71-36-3	n-Butyl alcohol (I)
U136	75-60-5	Cacodylic acid
U032	13765-19-0	Calcium chromate
U372	10605-21-7	Carbamic acid, 1H-benzimidazol-2-yl, methyl
U271	17804-35-2	Carbamic acid, [1-[(butylamino)carbonyl]-1H- benzimidazol-2-yl]-, methyl ester. (5/96)
U280	101-27-9	Carbamic acid, (3-chlorophenyl)-, 4-chloro-2- butynyl ester. (5/96)
U373	122-42-9	Carbamic acid, phenyl-, 1-methylethyl ester.
U409	23564-05-8	Carbamic acid, [1,2-phenylenebis (iminocarbonothioyl)]bis-, dimethyl ester. (5/96)
U238	51-79-6	Carbamic acid, ethyl ester
U178	615-53-2	Carbamic acid, methylnitroso-, ethyl ester
U097	79-44-7	Carbamic chloride, dimethyl-
U114	¹ 111-54-6	Carbamodithioic acid, 1,2-ethanediy]bis-, salts & esters
U062	2303-16-4	Carbamothioic acid, bis(1-methylethyl)-, S-(2,3-dichloro-2-propenyl) ester
U389	2303-17-5	Carbamothioic acid, bis(1-methylethyl)-, S-(2,3,3-trichloro-2-propenyl) ester. (5/96)
U387	52888-80-9	Carbamothioic acid, dipropyl-, S-(phenylmethyl) ester. (5/96)
U279	63-25-2	Carbaryl. (5/96)

261.33(f) Lists of Subpart D Toxic Hazardous Wastes		
HW #	CAS#	Substance (11/90; 12/92; 12/93; 5/96, 9/98)
U372	10605-21-7	Carbendazim. (5/96)
U367	1563-38-8	Carbofuran phenol. (5/96)
U215	6533-73-9	Carbonic acid, dithallium(1+) salt
U033	353-50-4	Carbonic difluoride
U156	79-22-1	Carbonochloridic acid, methyl ester (I, T)
U033	353-50-4	Carbon oxyfluoride (R, T)
U211	56-23-5	Carbon tetrachloride
U034	75-87-6	Chloral
U035	305-03-3	Chlorambucil
U036	57-74-9	Chlordane, alpha & gamma isomers
U026	494-03-1	Chlornaphazin
U037	108-90-7	Chlorobenzene
U038	510-15-6	Chlorobenzilate
U039	59-50-7	p-Chloro-m-cresol
U042	110-75-8	2-Chloroethyl vinyl ether
U044	67-66-3	Chloroform
U046	107-30-2	Chloromethyl methyl ether
U047	91-58-7	beta-Chloronaphthalene
U048	95-57-8	o-Chlorophenol
U049	3165-93-3	4-Chloro-o-toluidine, hydrochloride
U032	13765-19-0	Chromic acid H ₂ CrO ₄ , calcium salt
U050	218-01-9	Chrysene
U051	----	Creosote
U052	1319-77-3	Cresol (Cresylic acid)
U053	4170-30-3	Crotonaldehyde
U055	98-82-8	Cumene (I)
U246	506-68-3	Cyanogen bromide (CN)Br
U197	106-51-4	2,5-Cyclohexadiene-1,4-dione
U056	110-82-7	Cyclohexane (I)
U129	58-89-9	Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1alpha,2alpha,3beta,4alpha,5alpha,6beta)-
U057	108-94-1	Cyclohexanone (I)
U130	77-47-4	1,3-Cyclopentadiene, 1,2,3,4,5,5-hexachloro-
U058	50-18-0	Cyclophosphamide
U240	¹ 94-75-7	2,4-D, salts & esters
U059	20830-81-3	Daunomycin
U060	72-54-8	DDD
U061	50-29-3	DDT
U062	2303-16-4	Diallate
U063	53-70-3	Dibenz[a,h]anthracene
U064	189-55-9	Dibenzo[a,i]pyrene
U066	96-12-8	1,2-Dibromo-3-chloropropane
U069	84-74-2	Dibutyl phthalate
U070	95-50-1	o-Dichlorobenzene
U071	541-73-1	m-Dichlorobenzene
U072	106-46-7	p-Dichlorobenzene
U073	91-94-1	3,3'-Dichlorobenzidine
U074	764-41-0	1,4-Dichloro-2-butene (I, T)
U075	75-71-8	Dichlorodifluoromethane
U078	75-35-4	1,1-Dichloroethylene
U079	156-60-5	1,2-Dichloroethylene
U025	111-44-4	Dichloroethyl ether
U027	108-60-1	Dichloroisopropyl ether
U024	111-91-1	Dichloromethoxy ethane
U081	120-83-2	2,4-Dichlorophenol
U082	87-65-0	2,6-Dichlorophenol
U084	542-75-6	1,3-Dichloropropene
U085	1464-53-5	1,2:3,4-Diepoxybutane (I, T)
U108	123-91-1	1,4-Diethyleneoxide
U028	117-81-7	Diethylhexyl phthalate
U395	5952-26-1	Diethylene glycol, dicarbamate. (5/96)
U086	1615-80-1	N,N'-Diethylhydrazine
U087	3288-58-2	O,O-Diethyl S-methyl dithiophosphate
U088	84-66-2	Diethyl phthalate
U089	56-53-1	Diethylstilbesterol

261.33(f) Lists of Subpart D Toxic Hazardous Wastes		
HW #	CAS#	Substance (11/90; 12/92; 12/93; 5/96, 9/98)
U090	94-58-6	Dihydrosafrole
U091	119-90-4	3,3'-Dimethoxybenzidine
U092	124-40-3	Dimethylamine (I)
U093	60-11-7	p-Dimethylaminoazobenzene
U094	57-97-6	7,12-Dimethylbenz[a]anthracene
U095	119-93-7	3,3'-Dimethylbenzidine
U096	80-15-9	alpha, alpha-Dimethylbenzylhydroperoxide (R)
U097	79-44-7	Dimethylcarbonyl chloride
U098	57-14-7	1,1-Dimethylhydrazine
U099	540-73-8	1,2-Dimethylhydrazine
U101	105-67-9	2,4-Dimethylphenol
U102	131-11-3	Dimethyl phthalate
U103	77-78-1	Dimethyl sulfate
U105	121-14-2	2,4-Dinitrotoluene
U106	606-20-2	2,6-Dinitrotoluene
U107	117-84-0	Di-n-octyl phthalate
U108	123-91-1	1,4-Dioxane
U109	122-66-7	1,2-Diphenylhydrazine
U110	142-84-7	Dipropylamine (I)
U111	621-64-7	Di-n-propylnitrosamine
U041	106-89-8	Epichlorohydrin
U001	75-07-0	Ethanal (I)
U174	55-18-5	Ethanamine, N-ethyl-N-nitroso-
U404	121-44-8	Ethanamine, N,N-diethyl- (5/96)
U155	91-80-5	1,2-Ethanediamine, N,N-dimethyl-N'-2- pyridinyl-N'-(2-thienylmethyl)-
U067	106-93-4	Ethane, 1,2-dibromo-
U076	75-34-3	Ethane, 1,1-dichloro-
U077	107-06-2	Ethane, 1,2-dichloro-
U131	67-72-1	Ethane, hexachloro-
U024	111-91-1	Ethane, 1,1'-[methylenebis(oxy)]bis[2-chloro-
U117	60-29-7	Ethane, 1,1'-oxybis-(I)
U025	111-44-4	Ethane, 1,1'-oxybis[2-chloro-
U184	76-01-7	Ethane, pentachloro-
U208	630-20-6	Ethane, 1,1,1,2-tetrachloro-
U209	79-34-5	Ethane, 1,1,2,2-tetrachloro-
U218	62-55-5	Ethanethioamide
U226	71-55-6	Ethane, 1,1,1-trichloro-
U227	79-00-5	Ethane, 1,1,2-trichloro-
U410	59669-26-0	Ethanimidothioic acid, N,N'-[thiobis[(methylimino)carbonyloxy]]bis-, dimethyl ester (5/96)
U394	30558-43-1	Ethanimidothioic acid, 2-(dimethylamino)-N- hydroxy-2-oxo-, methyl ester.
U359	110-80-5	Ethanol, 2-ethoxy-
U173	1116-54-7	Ethanol, 2,2'-(nitrosoimino)bis-
U395	5952-26-1	Ethanol, 2,2'-oxybis-, dicarbamate. (5/96)
U004	98-86-2	Ethanone, 1-phenyl-
U043	75-01-4	Ethene, chloro-
U042	110-75-8	Ethene, (2-chloroethoxy)-
U078	75-35-4	Ethene, 1,1-dichloro-
U079	156-60-5	Ethene, 1,2-dichloro-, (E)-
U210	127-18-4	Ethene, tetrachloro-
U228	79-01-6	Ethene, trichloro-
U112	141-78-6	Ethyl acetate (I)
U113	140-88-5	Ethyl acrylate (I)
U238	51-79-6	Ethyl carbamate (urethane)
U117	60-29-7	Ethyl ether (I)
U114	111-54-6	Ethylenebisdithiocarbamic acid, salts & esters
U067	106-93-4	Ethylene dibromide
U077	107-06-2	Ethylene dichloride
U359	110-80-5	Ethylene glycol monoethyl ether
U115	75-21-8	Ethylene oxide (I, T)
U116	96-45-7	Ethylenethiourea
U076	75-34-3	Ethylidene dichloride
U118	97-63-2	Ethyl methacrylate
U119	62-50-0	Ethyl methanesulfonate
U120	206-44-0	Fluoranthene

261.33(f) Lists of Subpart D Toxic Hazardous Wastes		
HW #	CAS#	Substance (11/90; 12/92; 12/93; 5/96, 9/98)
U122	50-00-0	Formaldehyde
U123	64-18-6	Formic acid (C, T)
U124	110-00-9	Furan (I)
U125	98-01-1	2-Furancarboxaldehyde (I)
U147	108-31-6	2,5-Furandione
U213	109-99-9	Furan, tetrahydro-(I)
U125	98-01-1	Furfural (I)
U124	110-00-9	Furfuran (I)
U206	18883-66-4	Glucopyranose, 2-deoxy-2-(3-methyl-3-nitrosoureido)-, D-
U206	18883-66-4	D-Glucose, 2-deoxy-2-[[[(methylnitrosoamino)- carbonyl]amino]-
U126	765-34-4	Glycidylaldehyde
U163	70-25-7	Guanidine, N-methyl-N'-nitro-N-nitroso-
U127	118-74-1	Hexachlorobenzene
U128	87-68-3	Hexachlorobutadiene
U130	77-47-4	Hexachlorocyclopentadiene
U131	67-72-1	Hexachloroethane
U132	70-30-4	Hexachlorophene
U243	1888-71-7	Hexachloropropene
U133	302-01-2	Hydrazine (R, T)
U086	1615-80-1	Hydrazine, 1,2-diethyl-
U098	57-14-7	Hydrazine, 1,1-dimethyl-
U099	540-73-8	Hydrazine, 1,2-dimethyl-
U109	122-66-7	Hydrazine, 1,2-diphenyl-
U134	7664-39-3	Hydrofluoric acid (C, T)
U134	7664-39-3	Hydrogen fluoride (C, T)
U135	7783-06-4	Hydrogen sulfide
U135	7783-06-4	Hydrogen sulfide H ₂ S
U096	80-15-9	Hydroperoxide, 1-methyl-1-phenylethyl- (R)
U116	96-45-7	2-Imidazolidinethione
U137	193-39-5	Indeno[1,2,3-cd]pyrene
U190	85-44-9	1,3-Isobenzofurandione
U140	78-83-1	Isobutyl alcohol (I, T)
U141	120-58-1	Isosafrole
U142	143-50-0	Kepone
U143	303-34-4	Lasiocarpine
U144	301-04-2	Lead acetate
U146	1335-32-6	Lead, bis(acetato-O)tetrahydroxytri-
U145	7446-27-7	Lead phosphate
U146	1335-32-6	Lead subacetate
U129	58-89-9	Lindane
U163	70-25-7	MNNG
U147	108-31-6	Maleic anhydride
U148	123-33-1	Maleic hydrazide
U149	109-77-3	Malononitrile
U150	148-82-3	Melphalan
U151	7439-97-6	Mercury
U152	126-98-7	Methacrylonitrile (I, T)
U092	124-40-3	Methanamine, N-methyl- (I)
U029	74-83-9	Methane, bromo-
U045	74-87-3	Methane, chloro- (I, T)
U046	107-30-2	Methane, chloromethoxy-
U068	74-95-3	Methane, dibromo-
U080	75-09-2	Methane, dichloro-
U075	75-71-8	Methane, dichlorodifluoro-
U138	74-88-4	Methane, iodo-
U119	62-50-0	Methanesulfonic acid, ethyl ester
U211	56-23-5	Methane, tetrachloro-
U153	74-93-1	Methanethiol (I, T)
U225	75-25-2	Methane, tribromo-
U044	67-66-3	Methane, trichloro-
U121	75-69-4	Methane, trichlorofluoro-
U036	57-74-9	4,7-Methano-1H-indene, 1,2,4,5,6,7,8,8-octachloro-2,3,3a,4,7,7a-hexahydro-
U154	67-56-1	Methanol (I)
U155	91-80-5	Methapyrilene

261.33(f) Lists of Subpart D Toxic Hazardous Wastes		
HW #	CAS#	Substance (11/90; 12/92; 12/93; 5/96, 9/98)
U142	143-50-0	1,3,4-Metheno-2H-cyclobuta[cd]pentalen-2-one, 1,1a,3,3a,4,5,5a,5b,6-decachlorooctahydro-
U247	72-43-5	Methoxychlor
U154	67-56-1	Methyl alcohol (I)
U029	74-83-9	Methyl bromide
U186	504-60-9	1-Methylbutadiene (I)
U045	74-87-3	Methyl chloride (I, T)
U156	79-22-1	Methyl chlorocarbonate (I, T)
U226	71-55-6	Methyl chloroform
U157	56-49-5	3-Methylcholanthrene
U158	101-14-4	4,4'-Methylenebis(2-chloroaniline)
U068	74-95-3	Methylene bromide
U080	75-09-2	Methylene chloride
U159	78-93-3	Methyl ethyl ketone (MEK) (I, T)
U160	1338-23-4	Methyl ethyl ketone peroxide (R, T)
U138	74-88-4	Methyl iodide
U161	108-10-1	Methyl isobutyl ketone (I)
U162	80-62-6	Methyl methacrylate (I, T)
U161	108-10-1	4-Methyl-2-pentanone (I)
U164	56-04-2	Methylthiouracil
U010	50-07-7	Mitomycin C
U059	20830-81-3	5,12-Naphthacenedione, 8-acetyl-10-[(3-amino-2,3,6-trideoxy)-alpha-L-lyxo-hexopyranosyl]oxy]-7,8,9,10-tetrahydro-6,8,11-trihydroxy-1-methoxy-, (8S-cis)-
U167	134-32-7	1-Naphthalenamine
U168	91-59-8	2-Naphthalenamine
U026	494-03-1	Naphthalenamine, N,N'-bis(2-chloroethyl)-
U165	91-20-3	Naphthalene
U047	91-58-7	Naphthalene, 2-chloro-
U166	130-15-4	1,4-Naphthalenedione
U236	72-57-1	2,7-Naphthalenedisulfonic acid, 3,3'-[(3,3'-dimethyl[1,1'-biphenyl]-4,4'-diyl)bis(azo)bis[5-amino-4-hydroxy]-, tetrasodium salt
U279	63-25-2	1-Naphthalenol, methylcarbamate. (5/96)
U166	130-15-4	1,4-Naphthoquinone
U167	134-32-7	alpha-Naphthylamine
U168	91-59-8	beta-Naphthylamine
U217	10102-45-1	Nitric acid, thallium(1+) salt
U169	98-95-3	Nitrobenzene (I, T)
U170	100-02-7	p-Nitrophenol
U171	79-46-9	2-Nitropropane (I, T)
U172	924-16-3	N-Nitrosodi-n-butylamine
U173	1116-54-7	N-Nitrosodiethanolamine
U174	55-18-5	N-Nitrosodiethylamine
U176	759-73-9	N-Nitroso-N-ethylurea
U177	684-93-5	N-Nitroso-N-methylurea
U178	615-53-2	N-Nitroso-N-methylurethane
U179	100-75-4	N-Nitrosopiperidine
U180	930-55-2	N-Nitrosopyrrolidine
U181	99-55-8	5-Nitro-o-toluidine
U193	1120-71-4	1,2-Oxathiolane, 2,2-dioxide
U058	50-18-0	2H-1,3,2-Oxazaphosphorin-2-amine, N,N-bis(2-chloroethyl)tetrahydro-, 2-oxide
U115	75-21-8	Oxirane (I, T)
U126	765-34-4	Oxiranecarboxyaldehyde
U041	106-89-8	Oxirane, (chloromethyl)-
U182	123-63-7	Paraldehyde
U183	608-93-5	Pentachlorobenzene
U184	76-01-7	Pentachloroethane
U185	82-68-8	Pentachloronitrobenzene (PCNB)
See F027	87-86-5	Pentachlorophenol
U161	108-10-1	Pentanol, 4-methyl-
U186	504-60-9	1,3-Pentadiene (I)
U187	62-44-2	Phenacetin
U188	108-95-2	Phenol
U048	95-57-8	Phenol, 2-chloro-
U039	59-50-7	Phenol, 4-chloro-3-methyl-
U081	120-83-2	Phenol, 2,4-dichloro-

261.33(f) Lists of Subpart D Toxic Hazardous Wastes		
HW #	CAS#	Substance (11/90; 12/92; 12/93; 5/96, 9/98)
U082	87-65-0	Phenol, 2,6-dichloro-
U089	56-53-1	Phenol, 4,4'-(1,2-diethyl-1,2-ethenediyl)bis-, (E)-
U101	105-67-9	Phenol, 2,4-dimethyl-
U052	1319-77-3	Phenol, methyl-
U132	70-30-4	Phenol, 2,2'-methylenebis[3,4,6-trichloro-
U411	114-26-1	Phenol, 2-(1-methylethoxy)-, methylcarbamate. (5/96)
U170	100-02-7	Phenol, 4-nitro-
See F027	87-86-5	Phenol, pentachloro-
See F027	58-90-2	Phenol, 2,3,4,6-tetrachloro-
See F027	95-95-4	Phenol, 2,4,5-trichloro-
See F027	88-06-2	Phenol, 2,4,6-trichloro-
U150	148-82-3	L-Phenylalanine, 4-[bis(2-chloroethyl)amino]-
U145	7446-27-7	Phosphoric acid, lead(2+) salt (2:3)
U087	3288-58-2	Phosphorodithioic acid, O,O-diethyl S-methyl ester
U189	1314-80-3	Phosphorus sulfide (R)
U190	85-44-9	Phthalic anhydride
U191	109-06-8	2-Picoline
U179	100-75-4	Piperidine, 1-nitroso-
U192	23950-58-5	Pronamide
U194	107-10-8	1-Propanamine (I, T)
U111	621-64-7	1-Propanamine, N-nitroso-N-propyl-
U110	142-84-7	1-Propanamine, N-propyl- (I)
U066	96-12-8	Propane, 1,2-dibromo-3-chloro-
U083	78-87-5	Propane, 1,2-dichloro-
U149	109-77-3	Propanedinitrile
U171	79-46-9	Propane, 2-nitro- (I, T)
U027	108-60-1	Propane, 2,2'-oxybis[2-chloro-
U193	1120-71-4	1,3-Propane sultone
See F027	93-72-1	Propanoic acid, 2-(2,4,5-trichlorophenoxy)-
U235	126-72-7	1-Propanol, 2,3-dibromo-, phosphate (3:1)
U140	78-83-1	1-Propanol, 2-methyl- (I, T)
U002	67-64-1	2-Propanone (I)
U007	79-06-1	2-Propenamide
U084	542-75-6	1-Propene, 1,3-dichloro-
U243	1888-71-7	1-Propene, 1,1,2,3,3,3-hexachloro-
U009	107-13-1	2-Propenenitrile
U152	126-98-7	2-Propenenitrile, 2-methyl- (I, T)
U008	79-10-7	2-Propenoic acid (I)
U113	140-88-5	2-Propenoic acid, ethyl ester (I)
U118	97-63-2	2-Propenoic acid, 2-methyl-, ethyl ester
U162	80-62-6	2-Propenoic acid, 2-methyl-, methyl ester (I, T)
U373	112-42-9	Propham. (5/96)
U411	114-26-1	Propoxur. (5/96)
U194	107-10-8	n-Propylamine (I, T)
U083	78-87-5	Propylene dichloride
U387	52888-80-9	Prosulfocarb. (5/96)
U148	123-33-1	3,6-Pyridazinedione, 1,2-dihydro-
U196	110-86-1	Pyridine
U191	109-06-8	Pyridine, 2-methyl-
U237	66-75-1	2,4-(1H,3H)-Pyrimidinedione, 5-[bis(2-chloroethyl)amino]-
U164	56-04-2	4(1H)-Pyrimidinone, 2,3-dihydro-6-methyl-2-thio-
U180	930-55-2	Pyrrolidine, 1-nitroso-
U200	50-55-5	Reserpine
U201	108-46-3	Resorcinol
U202	581-07-2	Saccharin, & salts
U203	94-59-7	Safrole
U204	7783-00-8	Selenious acid
U204	7783-00-8	Selenium dioxide
U205	7488-56-4	Selenium sulfide
U205	7488-56-4	Selenium sulfide SeS ₂ (R, T)
U015	115-02-6	L-Serine, diazoacetate (ester)
See F027	93-72-1	Silvex (2,4,5-TP)
U206	18883-66-4	Streptozotocin
U103	77-78-1	Sulfuric acid, dimethyl ester

261.35 Deletion of certain hazardous waste codes following equipment cleaning and replacement

261.33(f) Lists of Subpart D Toxic Hazardous Wastes		
HW #	CAS#	Substance (11/90; 12/92; 12/93; 5/96, 9/98)
U189	1314-80-3	Sulfur phosphide (R)
See F027	93-76-5	2,4,5-T
U207	95-94-3	1,2,4,5-Tetrachlorobenzene
U208	630-20-6	1,1,1,2-Tetrachloroethane
U209	79-34-5	1,1,2,2-Tetrachloroethane
U210	127-18-4	Tetrachloroethylene
See F027	58-90-2	2,3,4,6-Tetrachlorophenol
U213	109-99-9	Tetrahydrofuran (I)
U214	563-68-8	Thallium(I) acetate
U215	6533-73-9	Thallium(I) carbonate
U216	7791-12-0	Thallium(I) chloride
U216	7791-12-0	Thallium chloride TlCl
U217	10102-45-1	Thallium(I) nitrate
U218	62-55-5	Thioacetamide
U410	59669-26-0	Thiodicarb. (5/96)
U153	74-93-1	Thiomethanol (I, T)
U244	137-26-8	Thioperoxydicarbonic diamide [(H ₂ N)C(S)] ₂ S ₂ , tetramethyl-
U409	23564-05-8	Thiophanate-methyl. (5/96)
U219	62-56-6	Thiourea
U244	137-26-8	Thiram
U220	108-88-3	Toluene
U221	25376-45-8	Toluenediamine
U223	26471-62-5	Toluene diisocyanate (R, T)
U328	95-53-4	o-Toluidine
U353	106-49-0	p-Toluidine
U222	636-21-5	o-Toluidine hydrochloride
U389	2303-17-5	Triallate. (5/96)
U011	61-82-5	1H-1,2,4-Triazol-3-amine
U227	79-00-5	1,1,2-Trichloroethane
U228	79-01-6	Trichloroethylene
U121	75-69-4	Trichloromonofluoromethane
See F027	95-95-4	2,4,5-Trichlorophenol
See F027	88-06-2	2,4,6-Trichlorophenol
U404	121-44-8	Triethylamine.(5/96)
U234	99-35-4	1,3,5-Trinitrobenzene (R, T)
U182	123-63-7	1,3,5-Trioxane, 2,4,6-trimethyl-
U235	126-72-7	Tris(2,3-dibromopropyl) phosphate
U236	72-57-1	Trypan blue
U237	66-75-1	Uracil mustard
U176	759-73-9	Urea, N-ethyl-N-nitroso-
U177	684-93-5	Urea, N-methyl-N-nitroso-
U043	75-01-4	Vinyl chloride
U248	¹ 81-81-2	Warfarin, & salts, when present at concentrations of 0.3% or less
U239	1330-20-7	Xylene (I)
U200	50-55-5	Yohimban-16-carboxylic acid, 11,17- dimethoxy-18-[(3,4,5- trimethoxybenzoyl)oxy]-, methyl ester, (3beta,16beta,17alpha,18beta,20alpha)-
U249	1314-84-7	Zinc phosphide Zn ₃ P ₂ , when present at concentrations of 10% or less

¹CAS Number given for parent compound only.

261.34 [Reserved]

261.35 Deletion of certain hazardous waste codes following equipment cleaning and replacement

(a) Wastes from wood preserving processes at plants that do not resume or initiate use of chlorophenolic preservatives will not meet the listing definition of F032 once the generator has met all of the requirements of paragraphs (b) and (c) of this section. These wastes may, however, continue to meet another hazardous waste listing description or may exhibit one or more of the hazardous waste characteristics.

(b) Generators must either clean or replace all process equipment that may have come into contact with chlorophenolic formulations or constituents thereof, including, but not limited to, treatment cylinders, sumps, tanks, piping systems, drip pads, fork lifts, and trams, in a manner that minimizes or eliminates the escape of hazardous waste or constituents, leachate, contaminated drippage, or hazardous waste decomposition products to the ground water, surface water, or atmosphere.

(1) Generators shall do one of the following:

(i) Prepare and follow an equipment cleaning plan and clean equipment in accordance with this section;

(ii) Prepare and follow an equipment replacement plan and replace equipment in accordance with this section; or

(iii) Document cleaning and replacement in accordance with this section, carried out after termination of use of chlorophenolic preservations.

(2) Cleaning Requirements.

(i) Prepare and sign a written equipment cleaning plan that describes:

- (A) The equipment to be cleaned;
- (B) How the equipment will be cleaned;
- (C) The solvent to be used in cleaning;
- (D) How solvent rinses will be tested;

and

(E) How cleaning residues will be disposed.

(ii) Equipment must be cleaned as follows:

(A) Remove all visible residues from process equipment;

(B) Rinse process equipment with an appropriate solvent until dioxins and dibenzofurans are not detected in the final solvent rinse.

(iii) Analytical requirements.

(A) Rinses must be tested in accordance with SW-846, Method 8290.

(B) "Not detected" means at or below the lower method calibration limit (MCL) in Method 8290, Table 1.

(iv) The generator must manage all residues from the cleaning process as F032 waste.

(3) Replacement requirements.

(i) Prepare and sign a written equipment replacement plan that describes:

- (A) The equipment to be replaced;
- (B) How the equipment will be replaced; and

(C) How the equipment will be disposed.

(ii) The generator must manage the discarded equipment as F032 waste.

(4) Documentation requirements.

(i) Document that previous equipment cleaning and/or replacement was performed in accordance with this section and occurred after cessation of use of chlorophenolic preservatives.

(c) The generator must maintain the following records documenting the cleaning and replacement as part of the facility's operating record:

- (1) The name and address of the facility;
- (2) Formulations previously used and the date on which their use ceased in each process at the plant;

261.38 Comparable/Syngas Fuel Exclusion.

(3) Formulations currently used in each process at the plant;

(4) The equipment cleaning or replacement plan;

(5) The name and address of any persons who conducted the cleaning and replacement;

(6) The dates on which cleaning and replacement were accomplished;

(7) The dates of sampling and testing;

(8) A description of the sample handling and preparation techniques, including techniques used for extraction, containerization, preservation, and chain-of-custody of the samples;

(9) A description of the tests performed, the date the tests were performed, and the results of the tests;

(10) The name and model numbers of the instrument(s) used in performing the tests;

(11) QA/QC documentation; and

(12) The following statement signed by the generator or his authorized representative:
I certify under penalty of law that all process equipment required to be cleaned or replaced under 261.35 was cleaned or replaced as represented in the equipment cleaning and replacement plan and accompanying documentation. I am aware that there are significant penalties for providing false information, including the possibility of fine or imprisonment.

261.38 Comparable/Syngas Fuel Exclusion.

Wastes that meet the following comparable/syngas fuel requirements are not solid wastes: (11/99)

(a) Comparable fuel specifications.

(1) Physical specifications.

(i) Heating value. The heating value must exceed 5,000 BTU/lbs. (11,500 J/g).

(ii) Viscosity. The viscosity must not exceed: 50 cs, as-fired.

(2) Constituent specifications. For compounds listed below, the specification levels and, where non-detect is the specification, minimum required detection limits are: [see Table 1].

(b) Synthesis gas fuel specification.-Synthesis gas fuel (i.e., syngas fuel) that is generated from hazardous waste must:

(1) Have a minimum Btu value of 100 Btu/Scf;

(2) contain less than 1 ppmv of total halogen;

(3) contain less than 300 ppmv of total nitrogen other than diatomic nitrogen (N₂);

(4) contain less than 200 ppmv of hydrogen sulfide; and

(5) Contain less than 1 ppmv of each hazardous constituent in the target list of Appendix VIII constituents of this part.

261.38 Table 1 Detection and Detection Limit Values for Comparable Fuel Specification					
Chemical name	CAS #	Composite value (mg/kg)	Heating value (BTU/lb)	Concentration limit (mg/kg at 10,000 BTU/lb)	Minimum required detection limit (mg/kg)
Total Nitrogen as N	NA	9000	18400	4900~	
Total Halogens as Cl	NA	1000	18400	540	
Total Organic Halogens as Cl	NA			(¹)	
Polychlorinated biphenyls, total [Aroclors, total]	1336-36-3	ND		ND	1.4
Cyanide, total.....	57-12-5	ND		ND	1.0
Metals:					
Antimony, total	7440-36-0	ND		12	
Arsenic, total	7440-38-2	ND		0.23	
Barium, total	7440-39-3	ND		23	
Beryllium, total	7440-41-7	ND		1.2	
Cadmium, total	7440-43-9		ND		1.2
Chromium, total	7440-47-3	ND		2.3	
Cobalt	7440-48-4	ND		4.6	
Lead, total	7439-92-1	57	18100	31	
Manganese	7439-96-5	ND		1.2	
Mercury total	7439-97-6	ND		0.25	
Nickel, total	7440-02-0	106	18400	58	
Selenium, total	7782-49-2	ND		0.23	
Silver, total	7440-22-4	ND		2.3	
Thallium, total	7440-28-0	ND		23	
Hydrocarbons:					
Benzo[a]anthracene	56-55-3	ND		2400	
Benzene	71-43-2	8000	19600	4100	
Benzo[b]fluoranthene	205-99-2	ND		2400	
Benzo[k]fluoranthene	207-08-9	ND		2400	
Benzo[a]pyrene	50-32-8	ND		2400	
Chrysene	218-01-9	ND		2400	
Dibenzo[a, h]anthracene	53-70-3	ND		2400	
7,12-Dimethylbenz[a]anthracene	57-97-6	ND		2400	
Fluoranthene	206-44-0	ND		2400	
Indeno(1,2,3-cd)pyrene	193-39-5	ND		2400	
3-Methylcholanthrene	56-49-5	ND		2400	
Naphthalene	91-20-3	6200	19400	3200	
Toluene	108-88-3	69000	19400	36000	
Oxygenates:					
Acetophenone	98-86-2	ND		2400	
Acrolein	107-02-8	ND		39	
Allyl alcohol	107-18-6	ND		30	
Bis(2-ethylhexyl)phthalate [Di-2-ethylhexyl phthalate]	117-81-7	ND		2400	
Butyl benzyl phthalate	85-68-7	ND		2400	
o-Cresol [2-Methyl phenol]	95-48-7	ND		2400	
m-Cresol [3-Methyl phenol]	108-39-4	ND		2400	
p-Cresol [4-Methyl phenol]	106-44-5	ND		2400	
Di-n-butyl phthalate	84-74-2	ND		2400	
Diethyl phthalate	84-66-2	ND		2400	
2,4-Dimethylphenol	105-67-9	ND		2400	
Dimethyl phthalate	131-11-3	ND		2400	
Di-n-octyl phthalate	117-84-0	ND		2400	
Endothall	145-73-3	ND		100	
Ethyl methacrylate	97-63-2	ND		39	
2-Ethoxyethanol [Ethylene glycol monoethyl ether]	110-80-5	ND		100	
Isobutyl alcohol	78-83-1	ND		39	
Isosafrole	120-58-1	ND		2400	
Methyl ethyl ketone [2-Butanone]	78-93-3	ND		39	
Methyl methacrylate	80-62-6	ND		39	
1,4-Naphthoquinone	130-15-4	ND		2400	
Phenol	108-95-2	ND		2400	
Propargyl alcohol [2-Propyn-1-ol]	107-19-7	ND		30	
Safrole	94-59-7	ND		2400	
Sulfonated Organics:					

261.38 Table 1 Detection and Detection Limit Values for Comparable Fuel Specification					
Chemical name	CAS #	Composite value (mg/kg)	Heating value (BTU/lb)	Concentration limit (mg/kg at 10,000 BTU/lb)	Minimum required detection limit (mg/kg)
Carbon disulfide	75-15-0	ND		ND	39
Disulfoton	298-04-4	ND		ND	2400
Ethyl methanesulfonate	62-50-0	ND		ND	2400
Methyl methanesulfonate	66-27-3	ND		ND	2400
Phorate	298-02-2	ND		ND	2400
1,3-Propane sultone	1120-71-4	ND		ND	100
Tetraethyldithiopyrophosphate [Sulfotepp]	3689-24-5	ND		ND	2400
Thiophenol [Benzenethiol]	108-98-5	ND		ND	30
O ₂ O-Triethyl phosphorothioate	126-68-1	ND		ND	2400
Nitrogenated Organics:					
Acetonitrile [Methyl cyanide]	75-05-8	ND		ND	39
2-Acetylaminofluorene [2-AAF]	53-96-3	ND		ND	2400
Acrylonitrile	107-13-1	ND		ND	39
4-Aminobiphenyl	92-67-1	ND		ND	2400
4-Aminopyridine	504-24-5	ND		ND	100
Aniline	62-53-3	ND		ND	2400
Benzidine	92-87-5	ND		ND	2400
Dibenz[a, j]acridine	224-42-0	ND		ND	2400
O ₂ O-Diethyl O-pyrazinyl phosphorothioate [Thionazin]	297-97-2	ND		ND	2400
Dimethoate	60-51-5	ND		ND	2400
p-(Dimethylamino) azobenzene [4-Dimethylaminoazobenzene]	60-11-7	ND		ND	2400
3,3'-Dimethylbenzidine	119-93-7	ND		ND	2400
a, a-Dimethylphenethylamine	122-09-8	ND		ND	2400
3,3'-Dimethoxybenzidine	119-90-4	ND		ND	100
1,3-Dinitrobenzene [m-Dinitrobenzene]	99-65-0	ND		ND	2400
4,6-Dinitro-o-cresol	534-52-1	ND		ND	2400
2,4-Dinitrophenol	51-28-5	ND		ND	2400
2,4-Dinitrotoluene	121-14-2	ND		ND	2400
2,6-Dinitrotoluene	606-20-2	ND		ND	2400
Dinoseb [2-sec-Butyl-4,6-dinitrophenol]	88-85-7	ND		ND	2400
Diphenylamine	122-39-4	ND		ND	2400
Ethyl carbamate [Urethane]	51-79-6	ND		ND	100
Ethylenethiourea (2-Imidazolidinethione)	96-45-7	ND		ND	110
Famphur	52-85-7	ND		ND	2400
Methacrylonitrile	126-98-7	ND		ND	39
Methapyrilene	91-80-5	ND		ND	2400
Methomyl	16752-77-5	ND		ND	57
2-Methylactonitrile, [Acetone cyanohydrin]	75-86-5	ND		ND	100
Methyl parathion	298-00-0	ND		ND	2400
MNNG (N-Metyl-N-nitroso-N'-nitroguanidine)	70-25-7	ND		ND	110
1-Naphthylamine, [α-Naphthylamine]	134-32-7	ND		ND	2400
2-Naphthylamine, [β-Naphthylamine]	91-59-8	ND		ND	2400
Nicotine	54-11-5	ND		ND	100
4-Nitroaniline [p-Nitroaniline]	100-01-6	ND		ND	2400
Nitrobenzene	98-95-3	ND		ND	2400
p-Nitrophenol, [p-Nitrophenol]	100-02-7	ND		ND	2400
5-Nitro-o-toluidine	99-55-8	ND		ND	2400
N-Nitrosodi-n-butylamine	924-16-3	ND		ND	2400
N-Nitrosodiethylamine	55-18-5	ND		ND	2400
N-Nitrosodiphenylamine, [Diphenylnitrosamine]	86-30-6	ND		ND	2400
N-Nitroso-N-methylethylamine	10595-95-6	ND		ND	2400
N-Nitrosomorpholine	59-89-2	ND		ND	2400
N-Nitrosopiperidine	100-75-4	ND		ND	2400
N-Nitrosopyrrolidine	930-55-2	ND		ND	2400
2-Nitropropane	79-46-9	ND		ND	30
Parathion	56-38-2	ND		ND	2400
Phenacetin	62-44-2	ND		ND	2400
1,4-Phenylene diamine, [p-Phenylenediamine]	106-50-3	ND		ND	2400
N-Phenylthiourea	103-85-5	ND		ND	57
2-Picoline [alpha-Picoline]	109-06-8	ND		ND	2400

261.38 Table 1 Detection and Detection Limit Values for Comparable Fuel Specification					
Chemical name	CAS #	Composite value (mg/kg)	Heating value (BTU/lb)	Concentration limit (mg/kg at 10,000 BTU/lb)	Minimum required detection limit (mg/kg)
Propylthiouracil, [6-Propyl-2-thiouracil]	51-52-5	ND		ND	100
Pyridine	110-86-1	ND		ND	2400
Strychnine	57-24-9	ND		ND	100
Thioacetamide	62-55-5	ND		ND	57
Thiofanox	39196-18-4	ND		ND	100
Thiourea	62-56-6	ND		ND	57
Toluene-2,4-diamine [2,4-Diaminotoluene]	95-80-7	ND		ND	57
Toluene-2,6-diamine [2,6-Diaminotoluene]	823-40-5	ND		ND	57
o-Toluidine	95-53-4	ND		ND	2400
p-Toluidine	106-49-0	ND		ND	100
1,3,5-Trinitrobenzene, [sym-Trinitrobenzene]	99-35-4	ND		ND	2400
Halogenated Organics:					
Allyl chloride	107-05-1	ND		ND	39
Aramite	140-57-8	ND		ND	2400
Benzal chloride [Dichloromethyl benzene]	98-87-3	ND		ND	100
Benzyl chloride	100-44-77	ND		ND	100
bis(2-Chloroethyl)ether [Dichloroethyl ether]	111-44-4	ND		ND	2400
Bromoform [Tribromomethane]	75-25-2	ND		ND	39
Bromomethane [Methyl bromide]	74-83-9	ND		ND	39
4-Bromophenyl phenyl ether [p-Bromo diphenyl ether]	101-55-3	ND		ND	2400
Carbon tetrachloride	56-23-5	ND		ND	39
Chlordane	57-74-9	ND		ND	14
p-Chloroaniline	106-47-8	ND		ND	2400
Chlorobenzene	108-90-7	ND		ND	39
Chlorobenzilate	510-15-6	ND		ND	2400
p-Chloro-m-cresol	59-50-7	ND		ND	2400
2-Chloroethyl vinyl ether	110-75-8	ND		ND	39
Chloroform	67-66-3	ND		ND	39
Chloromethane [Methyl chloride]	74-87-3	ND		ND	39
2-Chloronaphthalene [beta-Chloronaphthalene]	91-58-7	ND		ND	2400
2-Chlorophenol [o-Chlorophenol]	95-57-8	ND		ND	2400
Chloroprene [2-Chloro-1,3-butadiene]	1126-99-8	ND		ND	39
2,4-D [2, 4-Dichlorophenoxyacetic acid]	94-75-7	ND		ND	7.0
Diallate	2303-16-4	ND		ND	2400
1,2-Dibromo-3-chloropropane	96-12-8	ND		ND	39
1,2-Dichlorobenzene [o-Dichlorobenzene]	95-50-1	ND		ND	2400
1,3-Dichlorobenzene [m-Dichlorobenzene]	541-73-1	ND		ND	2400
1,4-Dichlorobenzene [p-Dichlorobenzene]	106-46-7	ND		ND	2400
3,3'-Dichlorobenzidine	91-94-1	ND		ND	2400
Dichlorodifluoromethane [CFC-12]	75-71-8	ND		ND	39
1,2-Dichloroethane [Ethylene dichloride]	107-06-2	ND		ND	39
1,1-Dichloroethylene [Vinylidene chloride]	75-35-4	ND		ND	39
Dichloromethoxy ethane [Bis(2-chloroethoxy)methane]	111-91-1	ND		ND	2400
2,4-Dichlorophenol	120-83-2	ND		ND	2400
2,6-Dichlorophenol	87-65-0	ND		ND	2400
1,2-Dichloropropane [Propylene dichloride]	78-87-5	ND		ND	39
cis-1,3-Dichloropropylene	10061-01-5	ND		ND	39
trans-1,3 -Dichloropropylene	10061-02-6	ND		ND	39
1,3-Dichloro-2-propanol	96-23-1	ND		ND	30
Endosulfan I	959-98-8	ND		ND	1.4
Endosulfan II	33213-65-9	ND		ND	1.4
Endrin	72-20-8	ND		ND	1.4
Endrin aldehyde	7421-93-4	ND		ND	1.4
Endrin Ketone	53494-70-5	ND		ND	1.4
Epichlorohydrin [1-Chloro-2,3-epoxy propane]	106-89-8	ND		ND	30
Ethylidene dichloride [1,1-Dichloroethane]	75-34-3	ND		ND	39
2-Fluoroacetamide	640-19-7	ND		ND	100
Heptachlor	76-44-8	ND		ND	1.4
Heptachlor epoxide	1024-57-3	ND		ND	2.8
Hexachlorobenzene	118-74-1	ND		ND	2400
Hexachloro-1, 3-butadiene [Hexachlorobutadiene]	87-68-3	ND		ND	2400

261.38 Table 1 Detection and Detection Limit Values for Comparable Fuel Specification					
Chemical name	CAS #	Composite value (mg/kg)	Heating value (BTU/lb)	Concentration limit (mg/kg at 10,000 BTU/lb)	Minimum required detection limit (mg/kg)
Hexachlorocyclopentadiene	77-47-4	ND		ND	2400
Hexachloroethane	67-72-1	ND		ND	2400
Hexachlorophene	70-30-4	ND		ND	59000
Hexachloropropene [Hexachloropropylene]	1888-71-7	ND		ND	2400
Isodrin	465-73-6	ND		ND	2400
Kepon [Chlordecone]	143-50-0	ND		ND	4700
Lindane [gamma-BHC] [gamma-Hexachlorocyclohexane]	58-89-9	ND		ND	1.4
Methylene chloride [Dichloromethane]	75-09-2	ND		ND	39
4,4'-Methylene-bis(2-chloroaniline)	101-14-4	ND		ND	100
Methyl iodide [Iodomethane]	74-88-4	ND		ND	39
Pentachlorobenzene	608-93-5	ND		ND	2400
Pentachloroethane	76-01-7	ND		ND	39
Pentachloronitrobenzene [PCNB] [Quintobenzene] [Quintozone]	82-68-8	ND		ND	2400
Pentachlorophenol	87-86-5	ND		ND	2400
Pronamide	23950-58-5	ND		ND	2400
Silvex [2,4,5-Trichlorophenoxypropionic acid]	93-72-1	ND		ND	7.0
2,3,7,8-Tetrachlorodibenzo-p-dioxin [2,3,7,8-TCDD]	1746-01-6	ND		ND	30
1,2,4,5-Tetrachlorobenzene	95-94-3	ND		ND	2400
1,1,2,2-Tetrachloroethane	79-34-5	ND		ND	39
Tetrachloroethylene [Perchloroethylene]	127-18-4	ND		ND	39
2,3,4,6-Tetrachlorophenol	58-90-2	ND		ND	2400
1,2,4-Trichlorobenzene	120-82-1	ND		ND	2400
1,1,1-Trichloroethane [Methyl chloroform]	71-55-6	ND		ND	39
1,1,2-Trichloroethane [Vinyl trichloride]	79-00-5	ND		ND	39
Trichloroethylene	79-01-6	ND		ND	39
Trichlorofluoromethane [Trichloromonofluoromethane]	75-69-4	ND		ND	39
2,4,5-Trichlorophenol	95-95-4	ND		ND	2400
2,4,6-Trichlorophenol	88-06-2	ND		ND	2400
1,2,3-Trichloropropane	96-18-4	ND		ND	39
Vinyl Chloride	75-01-4	ND		ND	39

Notes: NA - Not Applicable.

ND - Nondetect

(1) 25 or individual halogenated organics listed below.

(c) Implementation. Waste that meets the comparable or syngas fuel specifications provided by paragraphs (a) or (b) of this section (these constituent levels must be achieved by the comparable fuel when generated, or as a result of treatment or blending, as provided in (3) or (4) below) is excluded from the definition of solid waste provided that the following requirements are met:

(1) Notices-For purposes of this section, the person claiming and qualifying for the exclusion is called the comparable/syngas fuel generator and the person burning the comparable/syngas fuel is called the comparable/syngas burner. The person who generates the comparable fuel or syngas fuel must claim and certify to the exclusion.

(i) State RCRA and CAA Directors in Authorized States or Regional RCRA and CAA Directors in Unauthorized States.

(A) The generator must submit a one-time notice to the Regional or State RCRA and CAA Directors, in whose jurisdiction the exclusion is being claimed and where the comparable/syngas fuel will be

burned, certifying compliance with the conditions of the exclusion and providing documentation as required by paragraph (C);

(B) If the generator is a company that generates comparable/syngas fuel at more than one facility, the generator shall specify at which sites the comparable/syngas fuel will be generated;

(C) A comparable/syngas fuel generator's notification to the Directors must contain the following items:

(1) the name, address, and RCRA ID number of the person/facility claiming the exclusion;

(2) the applicable EPA Hazardous Waste Codes for the hazardous waste;

(3) name and address of the units, meeting the requirements of 261.38(c)(2), that will burn the comparable/syngas fuel; and

(4) the following statement is signed and submitted by the person claiming the exclusion or his authorized representative:

Under penalty of criminal and civil prosecution for making or submitting false statements, representations,

or omissions, I certify that the requirements of 261.38 have been met for all waste identified in this notification. Copies of the records and information required at 261.38(c)(10) are available at the comparable/syngas fuel generators facility. Based on my inquiry of the individuals immediately responsible for obtaining the information, the information is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

(ii) Public Notice. Prior to burning an excluded comparable/syngas fuel, the burner must publish in a major newspaper of general circulation local to the site where the fuel will be burned, a notice entitled "Notification of Burning a Comparable/Syngas Fuel Excluded Under the Resource Conservation and Recovery Act" containing the following information:

- (A) name, address, and RCRA ID number of the generating facility;
- (B) name and address of the unit(s) that will burn the comparable/syngas fuel;
- (C) a brief, general description of the manufacturing, treatment, or other process generating the comparable/syngas fuel;
- (D) an estimate of the average and maximum monthly and annual quantity of the waste claimed to be excluded; and
- (E) name and mailing address of the Regional or State Directors to whom the claim was submitted.

(2) Burning.-The comparable/syngas fuel exclusion for fuels meeting the requirements of paragraphs (a) or (b) and (c)(1) applies only if the fuel is burned in the following units that also shall be subject to Federal/State/local air emission requirements, including all applicable CAA MACT requirements:

- (i) Industrial furnaces as defined in 260.10 of this chapter;
- (ii) Boilers, as defined in 260.10 of this chapter, that are further defined as follows:
 - (A) Industrial boilers located on the site of a facility engaged in a manufacturing process where substances are transformed into new products, including the component parts of products, by mechanical or chemical processes; or
 - (B) Utility boilers used to produce electric power, steam, heated or cooled air, or other gases or fluids for sale;
 - (iii) Hazardous waste incinerators subject to regulation under Subpart O of parts 264 or 265 of this chapter or applicable CAA MACT standards.
 - (iv) Gas turbines used to produce electric power, steam, heated or cooled air, or other gases or fluids for sale. (6/02)

261.38 Comparable/Syngas Fuel Exclusion.

(3) Blending to Meet the Viscosity Specification.- A hazardous waste blended to meet the viscosity specification shall:

- (i) as generated and prior to any blending, manipulation, or processing meet the constituent and heating value specifications of paragraphs (a)(1)(i) and (a)(2); (10/01)
- (ii) be blended at a facility that is subject to the applicable requirements of parts 264 and 265, or 262.34; and
- (iii) not violate the dilution prohibition of 261.38(c)(6).

(4) Treatment to Meet the Comparable Fuel Exclusion Specifications.

(i) A hazardous waste may be treated to meet the exclusion specifications of (a)(1) and (2) provided the treatment:

- (A) destroys or removes the constituent listed in the specification or raises the heating value by removing or destroying hazardous constituents or materials;
- (B) is performed at a facility that is subject to the applicable requirements of parts 264 and 265, or 262.34; and
- (C) does not violate the dilution prohibition of 261.38(c)(6).

(ii) Residuals resulting from the treatment of a hazardous waste listed in Subpart D of this part to generate a comparable fuel remain a hazardous waste.

(5) Generation of a Syngas Fuel.

(i) A syngas fuel can be generated from the processing of hazardous wastes to meet the exclusion specifications of 261.38(b) provided the processing:

- (A) destroys or removes the constituent listed in the specification or raises the heating value by removing or destroying constituents or materials;
- (B) is performed at a facility that is subject to the applicable requirements of parts 264 and 265, or 262.34 or is an exempt recycling unit pursuant to 261.6(c); and
- (C) does not violate the dilution prohibition of 261.38(c)(6).

(ii) Residuals resulting from the treatment of a hazardous waste listed in Subpart D of this part to generate a syngas fuel remain a hazardous waste.

(6) Dilution Prohibition for Comparable and Syngas Fuels.- No generator, transporter, handler, or owner or operator of a treatment, storage, or disposal facility shall in any way dilute a hazardous waste to meet the exclusion specifications of (a)(1)(i), (a)(2) or (b) of this section.

(7) Waste Analysis Plans. The generator of a comparable/syngas fuel shall develop and follow a written waste analysis plan which describes the procedures for sampling and analysis of the hazardous waste to be excluded. The waste analysis plan shall be developed in accordance with the applicable sections of

the “Test Methods for Evaluating Solid Waste, Physical/Chemical Methods” (SW-846). The plan shall be followed and retained at the facility excluding the waste.

(i) At a minimum, the plan must specify:

(A) the parameters for which each hazardous waste will be analyzed and the rationale for the selection of those parameters;

(B) the test methods which will be used to test for these parameters;

(C) the sampling method which will be used to obtain a representative sample of the waste to be analyzed;

(D) the frequency with which the initial analysis of the waste will be reviewed or repeated to ensure that the analysis is accurate and up to date; and

(E) if process knowledge is used in the waste determination, any information prepared by the generator in making such determination.

(ii) The waste analysis plan shall also contain records of the following:

(A) the dates and times waste samples were obtained, and the dates the samples were analyzed;

(B) the names and qualifications of the person(s) who obtained the samples;

(C) a description of the temporal and spatial locations of the samples;

(D) the name and address of the laboratory facility at which analyses of the samples were performed;

(E) a description of the analytical methods used, including any clean-up and sample preparation methods;

(F) all quantitation limits achieved and all other quality control results for the analysis (including method blanks, duplicate analyses, matrix spikes, etc.), laboratory quality assurance data, and description of any deviations from analytical methods written in the plan or from any other activity written in the plan which occurred;

(G) all laboratory results demonstrating that the exclusion specifications have been met for the waste; and

(H) all laboratory documentation that support the analytical results, unless a contract between the claimant and the laboratory provides for the documentation to be maintained by the laboratory for the period specified in 261.38(c)(11) and also provides for the availability of the documentation to the claimant upon request.

(iii) Syngas fuel generators shall submit for approval, prior to performing sampling, analysis, or any management of a syngas fuel as an excluded waste, a waste analysis plan containing the elements of (i) above to the appropriate regulatory authority. The approval of waste analysis plans must be stated in writing and received by the facility prior to sampling and analysis to

261.38 Comparable/Syngas Fuel Exclusion.

demonstrate the exclusion of a syngas. The approval of the waste analysis plan may contain such provisions and conditions as the regulatory authority deems appropriate.

(8) Comparable Fuel Sampling and Analysis.

(i) General. For each waste for which an exclusion is claimed, the generator of the hazardous waste must test for all the constituents on appendix VIII to this part, except those that the generator determines, based on testing or knowledge, should not be present in the waste. The generator is required to document the basis of each determination that a constituent should not be present. The generator may not determine that any of the following categories of constituents should not be present:

(A) a constituent that triggered the toxicity characteristic for the waste constituents that were the basis of the listing of the waste stream, or constituents for which there is a treatment standard for the waste code in 268.40;

(B) a constituent detected in previous analysis of the waste;

(C) constituents introduced into the process that generates the waste; or

(D) constituents that are byproducts or side reactions to the process that generates the waste. Note to paragraph (c)(8): Any claim under this section must be valid and accurate for all hazardous constituents; a determination not to test for a hazardous constituent will not shield a generator from liability should that constituent later be found in the waste above the exclusion specifications.

(ii) For each waste for which the exclusion is claimed where the generator of the comparable/syngas fuel is not the original generator of the hazardous waste, the generator of the comparable/syngas fuel may not use process knowledge pursuant to (i) above and must test to determine that all of the constituent specifications of 261.38(a)(2) and 261.38(b) have been met.

(iii) The comparable/syngas fuel generator may use any reliable analytical method to demonstrate that no constituent of concern is present at concentrations above the specification levels. It is the responsibility of the generator to ensure that the sampling and analysis are unbiased, precise, and representative of the waste. For the waste to be eligible for exclusion, a generator must demonstrate that:

(A) each constituent of concern is not present in the waste above the specification level at the 95% upper confidence limit around the mean; and

(B) the analysis could have detected the presence of the constituent at or below the specification level at the 95% upper confidence limit around the mean.

(iv) Nothing in this paragraph preempts, overrides or otherwise negates the provision in 262.11

of this chapter, which requires any person who generates a solid waste to determine if that waste is a hazardous waste.

(v) In an enforcement action, the burden of proof to establish conformance with the exclusion specification shall be on the generator claiming the exclusion.

(vi) The generator must conduct sampling and analysis in accordance with their waste analysis plan developed under (7) above.

(vii) Syngas fuel and comparable fuel that has not been blended in order to meet the kinematic viscosity specifications shall be analyzed as generated.

(viii) If a comparable fuel is blended in order to meet the kinematic viscosity specifications, the generator shall:

(A) analyze the fuel as generated to ensure that it meets the constituent and heating value specifications; and

(B) after blending, analyze the fuel again to ensure that the blended fuel continues to meet all comparable/syngas fuel specifications.

(ix) Excluded comparable/syngas fuel must be re-tested, at a minimum, annually and must be retested after a process change that could change the chemical or physical properties of the waste.

(9) Speculative Accumulation. Any persons handling a comparable/syngas fuel are subject to the speculative accumulation test under 261.2(c)(4).

(10) Records. The generator must maintain records of the following information on-site:

(i) all information required to be submitted to the implementing authority as part of the notification of the claim:

(A) the owner/operator name, address, and RCRA facility ID number of the person claiming the exclusion;

(B) the applicable EPA Hazardous Waste Codes for each hazardous waste excluded as a fuel; and

(C) the certification signed by the person claiming the exclusion or his authorized representative.

(ii) a brief description of the process that generated the hazardous waste and process that generated the excluded fuel, if not the same;

(iii) an estimate of the average and maximum monthly and annual quantities of each waste claimed to be excluded;

(iv) documentation for any claim that a constituent is not present in the hazardous waste as required under 261.38(c)(8)(i);

(v) the results of all analyses and all detection limits achieved as required under 261.38(c)(8);

(vi) if the excluded waste was generated through treatment or blending, documentation as required under section 261.38(c)(3) or (4);

261.38 Comparable/Syngas Fuel Exclusion.

(vii) if the waste is to be shipped off-site, a certification from the burner as required under section 261.38(c)(12);

(viii) A waste analysis plan and the results of the sampling and analysis that includes the following:

(A) the dates and times waste samples were obtained, and the dates the samples were analyzed;

(B) the names and qualifications of the person(s) who obtained the samples;

(C) a description of the temporal and spatial locations of the samples;

(D) the name and address of the laboratory facility at which analyses of the samples were performed;

(E) a description of the analytical methods used, including any clean-up and sample preparation methods;

(F) all quantitation limits achieved and all other quality control results for the analysis (including method blanks, duplicate analyses, matrix spikes, etc.), laboratory quality assurance data, and description of any deviations from analytical methods written in the plan or from any other activity written in the plan which occurred;

(G) all laboratory analytical results demonstrating that the exclusion specifications have been met for the waste; and

(H) all laboratory documentation that support the analytical results, unless a contract between the claimant and the laboratory provides for the documentation to be maintained by the laboratory for the period specified in 261.38(c)(11) and also provides for the availability of the documentation to the claimant upon request; and

(ix) If the generator ships comparable/syngas fuel off-site for burning, the generator must retain for each shipment the following information on-site:

(A) the name and address of the facility receiving the comparable/syngas fuel for burning;

(B) the quantity of comparable/syngas fuel shipped and delivered;

(C) the date of shipment or delivery;

(D) a cross-reference to the record of comparable/syngas fuel analysis or other information used to make the determination that the comparable/syngas fuel meets the specifications as required under 261.38(c)(8); and

(E) a one-time certification by the burner as required under 261.38(c)(12).

(11) Records Retention. Records must be maintained for the period of three years. A generator must maintain a current waste analysis plan during that three year period.

(12) Burner certification. Prior to submitting a notification to the State and Regional Directors, a comparable/syngas fuel generator who intends to ship

their fuel off-site for burning must obtain a one-time written, signed statement from the burner:

(i) certifying that the comparable/syngas fuel will only be burned in an industrial furnace or boiler, utility boiler, or hazardous waste incinerator, as required under paragraph (c)(2);

(ii) identifying the name and address of the units that will burn the comparable/syngas fuel; and

(iii) certifying that the state in which the burner is located is authorized to exclude wastes as comparable/syngas fuel under the provisions of 261.38.

(13) Ineligible Waste Codes. Wastes that are listed because of presence of dioxins or furans, as set out in Appendix VII of Part 261, are not eligible for this exclusion, and any fuel produced from or otherwise containing these wastes remains a hazardous waste subject to full Subtitle C regulation

Appendix I Representative Sampling Methods (12/92; 12/93)

The methods and equipment used for sampling waste materials will vary with the form and consistency of the waste materials to be sampled. Samples collected using the sampling protocols listed below, for sampling waste with properties similar to the indicated materials, will be considered by the Agency to be representative of the waste.

Extremely viscous liquid - ASTM Standard D140-70
Crushed or powdered material - ASTM Standard D346-75
Soil or rock-like material - ASTM Standard D420-69
Soil-like material - ASTM Standard D1452-65.

Fly Ash-like material - ASTM Standard D2234-76
[ASTM Standards are available from ASTM, 1916 Race Street, Philadelphia, PA 19103]

Containerized liquid wastes - "COLIWASA" described in "Test Methods for the Evaluation of Solid Waste, Physical/Chemical Methods,"^{1a} U.S. Environmental Protection Agency Publication SW-846,

Liquid waste in pits, ponds, lagoons, and similar reservoirs. - "Pond Sampler" described in "Test

Methods for the Evaluation of Solid Waste, Physical/Chemical Methods."^{1a}

FOOTNOTE: ^{1a} These methods are also described in Samplers and Sampling Procedures for Hazardous Waste Streams, EPA 600/2-80-018, January 1980.

The Department will consider other methodologies for testing from other sources (such as) i.e., Standard Methods, other Federal Regulations, as long as the proper QA/QC is provided. This manual also contains additional information on application of these protocols.

Appendix II Method 1311 Toxicity Characteristic Leaching Procedure (TCLP)

NOTE: The TCLP (Method 1311) is published in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as incorporated by reference in 260.11. (12/92; 12/93)

Appendix III Chemical Analysis Test Methods

Note: Appropriate analytical procedures to determine whether a sample contains a given toxic constituent are specified in Chapter Two, "Choosing the Correct Procedure" found in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as incorporated by reference in 260.11. Prior to final sampling and analysis method selection, the individual should consult the specific section or method described in SW-846 for additional guidance on which of the approved methods should be employed for a specific sample analysis situation. (11/90, 12/92, 12/93)

Appendix IV [Reserved for Radioactive Waste Test Methods]

Appendix V [Reserved for Infectious Waste Treatment Specifications]

Appendix VI [Reserved for Etiologic Agents]

Appendix VII Basis for Listing Hazardous Waste

Appendix VII Basis for Listing Hazardous Waste	
Hazardous Waste #	Basis for Listing Hazardous Waste Hazardous constituents for which listed (11/90, 12/92, 5/96, 9/98, 2/07)
F001	Tetrachloroethylene, methylene chloride trichloroethylene, 1,1,1-trichloroethane, carbon tetrachloride, chlorinated fluorocarbons.
F002	Tetrachloroethylene, methylene chloride, trichloroethylene, 1,1,1-trichloroethane, 1,1,2-trichloroethane, chlorobenzene, 1,1,2-trichloro-1,2,2-trifluoroethane, ortho-dichlorobenzene, trichlorofluoromethane.
F003	N.A.
F004	Cresols and cresylic acid, nitrobenzene.
F005	Toluene, methyl ethyl ketone, carbon disulfide, isobutanol, pyridine, 2-ethoxyethanol, benzene, 2-nitropropane.
F006	Cadmium, hexavalent chromium, nickel, cyanide (complexed).
F007	Cyanide (salts).
F008	Cyanide (salts).
F009	Cyanide (salts).
F010	Cyanide (salts).
F011	Cyanide (salts).
F012	Cyanide (complexed).
F019	Hexavalent chromium, cyanide (complexed).

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Hazardous Waste #	Basis for Listing Hazardous Waste Hazardous constituents for which listed (11/90, 12/92, 5/96, 9/98, 2/07)
F020	Tetra- and pentachlorodibenzo-p-dioxins; tetra and pentachlorodi-benzofurans; tri- and tetrachlorophenols and their chlorophenoxy derivative acids, esters, ethers, amine and other salts.
F021	Penta- and hexachlorodibenzo-p-dioxins; penta- and hexachlorodibenzofurans; pentachlorophenol and its derivatives.
F022	Tetra-, penta-, and hexachlorodibenzo-p-dioxins; tetra-, penta-, and hexachlorodibenzofurans.
F023	Tetra-, and pentachlorodibenzo-p-dioxins; tetra- and pentachlorodibenzofurans; tri- and tetrachlorophenols and their chlorophenoxy derivative acids, esters, ethers, amine and other salts.
F024	Chloromethane, dichloromethane, trichloromethane, carbon tetrachloride, chloroethylene, 1,1-dichloroethane, 1,2-dichloroethane, trans-1,2-dichloroethylene, 1,1-dichloroethylene, 1,1,1-trichloroethane, 1,1,2-trichloroethane, trichloroethylene, 1,1,1,2-tetra-chloroethane, 1,1,2,2-tetrachloroethane, tetrachloroethylene, pentachloroethane, hexachloroethane, allyl chloride (3-chloropropene), dichloropropane, dichloropropene, 2-chloro-1,3-butadiene, hexachloro-1,3-butadiene, hexachlorocyclopentadiene, hexachlorocyclohexane, benzene, chlorobenzene, dichlorobenzenes, 1,2,4-trichlorobenzene, tetrachlorobenzene, pentachlorobenzene, hexachlorobenzene, toluene, naphthalene.
F025	Chloromethane; Dichloromethane; Trichloromethane; Carbon tetrachloride; Chloroethylene; 1,1-Dichloroethane; 1,2-Dichloroethane; trans-1,2-Dichloroethylene; 1,1-Dichloroethylene; 1,1,1-Trichloroethane; 1,1,2-Trichloroethane; Trichloroethylene; 1,1,1,2-Tetrachloroethane; 1,1,2,2-Tetrachloroethane; Tetrachloroethylene; Pentachloroethane; Hexachloroethane; Allyl chloride (3-Chloropropene); Dichloropropane; Dichloropropene; 2-Chloro-1,3-butadiene; Hexachloro-1,3-butadiene; Hexachlorocyclopentadiene; Benzene; Chlorobenzene; Dichlorobenzene; 1,2,4-Trichlorobenzene; Tetrachlorobenzene; Pentachlorobenzene; Hexachlorobenzene; Toluene; Naphthalene.
F026	Tetra-, penta-, and hexachlorodibenzo-p-dioxins; tetra-, penta-, and hexachlorodibenzofurans.
F027	Tetra-, penta-, and hexachlorodibenzo-p-dioxins; tetra-, penta-, and hexachlorodibenzofurans; tri-, tetra-, and pentachlorophenols and their chlorophenoxy derivative acids, esters, ethers, amine and other salts.
F028	Tetra-, penta-, and hexachlorodibenzo-p-dioxins; tetra-, penta-, and hexachlorodibenzofurans; tri-, tetra-, and pentachlorophenols and their chlorophenoxy derivative acids, esters, ethers, amine and other salts.
F032	Benz(a)anthracene, benzo(a)pyrene, dibenz(a,h)-anthracene, indeno(1,2,3-cd)pyrene, pentachlorophenol, arsenic, chromium, tetra-, penta-, hexa-, heptachlorodibenzo-p-dioxins, tetra-, penta-, hexa-, heptachlorodibenzofurans (12/92)
F034	Benz(a)anthracene, benzo(k)fluoranthene, benzo(a)pyrene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene, naphthalene, arsenic, chromium (12/92).
F035	Arsenic, chromium, lead (12/92).
F037	Benzene, benzo(a)pyrene, chrysene, lead, chromium (12/92).
F038	Benzene, benzo(a)pyrene, chrysene, lead, chromium (12/92).
F039	All constituents for which treatment standards are specified for multi-source leachate (wastewaters and nonwastewaters) under 268.43, Table CCW (12/92).
K001	Pentachlorophenol, phenol, 2-chlorophenol, p-chloro-m-cresol, 2,4-dimethylphenyl, 2,4-dinitrophenol, trichlorophenols, tetrachlorophenols, 2,4-dinitrophenol, creosote, chrysene, naphthalene, fluoranthene, benzo(b)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene, benz(a)anthracene, dibenz(a)anthracene, acenaphthalene.
K002	Hexavalent chromium, lead
K003	Hexavalent chromium, lead.
K004	Hexavalent chromium.
K005	Hexavalent chromium, lead.
K006	Hexavalent chromium.
K007	Cyanide (complexed), hexavalent chromium.
K008	Hexavalent chromium.
K009	Chloroform, formaldehyde, methylene chloride, methyl chloride, paraldehyde, formic acid.
K010	Chloroform, formaldehyde, methylene chloride, methyl chloride, paraldehyde, formic acid, chloroacetaldehyde.
K011	Acrylonitrile, acetonitrile, hydrocyanic acid.
K013	Hydrocyanic acid, acrylonitrile, acetonitrile.
K014	Acetonitrile, acrylamide.
K015	Benzyl chloride, chlorobenzene, toluene, benzotrichloride.
K016	Hexachlorobenzene, hexachlorobutadiene, carbon tetrachloride, hexachloroethane, perchloroethylene.
K017	Epichlorohydrin, chloroethers [bis(chloromethyl) ether and bis (2-chloroethyl) ethers], trichloropropane, dichloropropanols.
K018	1,2-dichloroethane, trichloroethylene, hexachlorobutadiene, hexachlorobenzene.
K019	Ethylene dichloride, 1,1,1-trichloroethane, 1,1,2-trichloroethane, tetrachloroethanes (1,1,2,2-tetrachloroethane and 1,1,1,2-tetrachloroethane), trichloroethylene, tetrachloroethylene, carbon tetrachloride, chloroform, vinyl chloride, vinylidene chloride.
K020	Ethylene dichloride, 1,1,1-trichloroethane, 1,1,2-trichloroethane, tetrachloroethanes (1,1,2,2-tetrachloroethane and 1,1,1,2-tetrachloroethane), trichloroethylene, tetrachloroethylene, carbon tetrachloride, chloroform, vinyl chloride, vinylidene chloride.
K021	Antimony, carbon tetrachloride, chloroform.
K022	Phenol, tars (polycyclic aromatic hydrocarbons).
K023	Phthalic anhydride, maleic anhydride.
K024	Phthalic anhydride, 1,4-naphthoquinone.
K025	Meta-dinitrobenzene, 2,4-dinitrotoluene.
K026	Paraldehyde, pyridines, 2-picoline.
K027	Toluene diisocyanate, toluene-2, 4-diamine.
K028	1,1,1-trichloroethane, vinyl chloride.
K029	1,2-dichloroethane, 1,1,1-trichloroethane, vinyl chloride, vinylidene chloride, chloroform.
K030	Hexachlorobenzene, hexachlorobutadiene, hexachloroethane, 1,1,1,2-tetrachloroethane, 1,1,2,2-tetrachloroethane, ethylene dichloride.
K031	Arsenic.

Appendix VII Basis for Listing Hazardous Waste	
Hazardous Waste #	Basis for Listing Hazardous Waste Hazardous constituents for which listed (11/90, 12/92, 5/96, 9/98, 2/07)
K032	Hexachlorocyclopentadiene.
K033	Hexachlorocyclopentadiene.
K034	Hexachlorocyclopentadiene.
K035	Creosote, chrysene, naphthalene, fluoranthene benzo(b) fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd) pyrene, benzo(a)anthracene, dibenzo(a)anthracene, acenaphthalene.
K036	Toluene, phosphorodithioic and phosphorothioic acid esters.
K037	Toluene, phosphorodithioic and phosphorothioic acid esters.
K038	Phorate, formaldehyde, phosphorodithioic and phosphorothioic acid esters.
K039	Phosphorodithioic and phosphorothioic acid esters.
K040	Phorate, formaldehyde, phosphorodithioic and phosphorothioic acid esters.
K041	Toxaphene.
K042	Hexachlorobenzene, ortho-dichlorobenzene.
K043	2,4-dichlorophenol, 2,6-dichlorophenol, 2,4,6-trichlorophenol.
K044	N.A.
K045	N.A.
K046	Lead.
K047	N.A.
K048	Hexavalent chromium, lead.
K049	Hexavalent chromium, lead.
K050	Hexavalent chromium.
K051	Hexavalent chromium, lead.
K052	Lead.
K060	Cyanide, naphthalene, phenolic compounds, arsenic.
K061	Hexavalent chromium, lead, cadmium.
K062	Hexavalent chromium, lead.
K064	Lead, cadmium.
K065	Lead, cadmium
K066	Lead, cadmium
K069	Hexavalent chromium, lead, cadmium.
K071	Mercury.
K073	Chloroform, carbon tetrachloride, hexachloroethane, trichloroethane, tetrachloroethylene, dichloroethylene, 1,1,2,2-tetrachloroethane.
K083	Aniline, diphenylamine, nitrobenzene, phenylenediamine.
K084	Arsenic.
K085	Benzene, dichlorobenzenes, trichlorobenzenes, tetrachlorobenzenes, pentachlorobenzene, hexachlorobenzene, benzyl chloride.
K086	Lead, hexavalent chromium.
K087	Phenol, naphthalene.
K088	Cyanide (complexes).
K090	Chromium.
K093	Phthalic anhydride, maleic anhydride.
K094	Phthalic anhydride.
K095	1,1,2-trichloroethane, 1,1,1,2-tetrachloroethane, 1,1,2,2-tetrachloroethane.
K096	1,2-dichloroethane, 1,1,1-trichloroethane, 1,1,2-trichloroethane.
K097	Chlordane, heptachlor.
K098	Toxaphene.
K099	2,4-dichlorophenol, 2,4,6-trichlorophenol.
K100	Hexavalent chromium, lead, cadmium.
K101	Arsenic.
K102	Arsenic.
K103	Aniline, nitrobenzene, phenylenediamine.
K104	Aniline, benzene, diphenylamine, nitrobenzene, phenylenediamine.
K105	Benzene, monochlorobenzene, dichlorobenzenes, 2,4,6-trichlorophenol.
K106	Mercury.
K107	1,1-Dimethylhydrazine (UDMH) (12/92).
K108	1,1-Dimethylhydrazine (UDMH) (12/92).
K109	1,1-Dimethylhydrazine (UDMH) (12/92).
K110	1,1-Dimethylhydrazine (UDMH) (12/92).
K111	2,4-Dinitrotoluene.
K112	2,4-Toluenediamine, o-toluidine, p-toluidine, aniline.
K113	2,4-Toluenediamine, o-toluidine, p-toluidine, aniline.
K114	2,4-Toluenediamine, o-toluidine, p-toluidine.
K115	2,4-Toluenediamine.
K116	Carbon tetrachloride, tetrachloroethylene, chloroform, phosgene.

Appendix VII Basis for Listing Hazardous Waste	
Hazardous Waste #	Basis for Listing Hazardous Waste Hazardous constituents for which listed (11/90, 12/92, 5/96, 9/98, 2/07)
K117	Ethylene dibromide.
K118	Ethylene dibromide.
K123	Ethylene thiourea.
K124	Ethylene thiourea.
K125	Ethylene thiourea.
K126	Ethylene thiourea.
K131	Dimethyl sulfate, methyl bromide.
K132	Methyl bromide.
K136	Ethylene dibromide.
K140	2,4,6-Tribromophenol. (11/99)
K141	Benzene, benz(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene. (12/93)
K142	Benzene, benz(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene. (12/93)
K143	Benzene, benz(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene. (12/93)
K144	Benzene, benz(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenz(a,h)anthracene. (12/93)
K145	Benzene, benz(a)anthracene, benzo(a)pyrene, dibenz(a,h)anthracene, naphthalene. (12/93)
K147	Benzene, benz(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene. (12/93)
K148	Benz(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene. (12/93)
K149	Benzotrachloride, benzyl chloride, chloroform, chloromethane, chlorobenzene, 1,4-dichlorobenzene, hexachlorobenzene, pentachlorobenzene, 1,2,4,5-tetrachlorobenzene, toluene. (12/93)
K150	Carbon tetrachloride, chloroform, chloromethane, 1,4-dichlorobenzene, hexachlorobenzene, pentachlorobenzene, 1,2,4,5-tetrachlorobenzene, 1,1,2,2-tetrachloroethane, tetrachloroethylene, 1,2,4-trichlorobenzene. (12/93)
K151	Benzene, carbon tetrachloride, chloroform, hexachlorobenzene, pentachlorobenzene, toluene, 1,2,4,5-tetrachlorobenzene, tetrachloroethylene. (12/93)
K156	Benomyl, carbaryl, carbendazim, carbofuran, carbosulfan, formaldehyde, methylene chloride, triethylamine. (5/96)
K157	Carbon tetrachloride, formaldehyde, methyl chloride, methylene chloride, pyridine, triethylamine. (5/96)
K158	Benomyl, carbendazim, carbofuran, carbosulfan, chloroform, methylene chloride. (5/96)
K159	Benzene, butylate, eptc, molinate, pebulate, vernolate. (5/96)
K160	Benzene, butylate, eptc, molinate, pebulate, vernolate. (5/96)
K161	Antimony, arsenic, metam-sodium, ziram. (5/96)
K169	Benzene. (8/00)
K170	Benzo(a)pyrene, dibenz(a,h)anthracene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, 3-methylcholanthrene, 7,12-dimethylbenz(a)anthracene. (8/00)
K171	Benzene, arsenic. (8/00)
K172	Benzene, arsenic. (8/00)
K174	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (1,2,3,4,6,7,8-HpCDD), 1,2,3,4,6,7,8- Heptachlorodibenzofuran (1,2,3,4,6,7,8-HpCDF), 1,2,3,4,7,8,9- Heptachlorodibenzofuran (1,2,3,6,7,8,9-HpCDF), HxCDDs (All Hexachlorodibenzo-p- dioxins), HxCDFs (All Hexachlorodibenzofurans), PeCDDs (All Pentachlorodibenzo-p-dioxins), OCDD (1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin, OCDF (1,2,3,4,6,7,8,9- Octachlorodibenzofuran), PeCDFs (All Pentachlorodibenzofurans), TCDDs (All tetrachlorodi-benzo- p- dioxins), TCDFs (All tetrachlorodibenzofurans). (6/02.)
K175	Mercury (6/02)
K176	Arsenic, Lead (6/03)
K177	Antimony (6/03)
K178	Thallium (6/03)
K181	Aniline, o-anisidine, 4-chloroaniline, p-cresidine, 2,4-dimethylaniline, 1,2-phenylenediamine, 1,3-phenylenediamine. (2/07)
K900	Tributyltin, Tributyltin Oxide, Tributyltin Chloride, Tributyltin Hydroxide, Tributyltin Bromide, Tributyltin Acetate, Tributyltin Fluoride, Triethyltin, Triethyltin Chloride (6/02)

N.A.= Waste is hazardous because it fails the test for the characteristics of ignitability, corrosivity, or reactivity.

Appendix VIII Hazardous Constituents		
Common name	Chemical abstracts name (9/98)	CAS #
A2213 (5/96)	Ethanimidothioic acid, 2- (dimethylamino) -N-hydroxy-2-oxo-, methyl ester	30558-43-1
Acetonitrile	Same	75-05-8
Acetophenone	Ethanone, 1-phenyl-	98-86-2
2-Acetylaminofluorene	Acetamide, N-9H-fluorene-2-yl-	53-96-3
Acetyl chloride	Same	75-36-5
1-Acetyl-2-thiourea	Acetamide, N-(aminothioxomethyl)-	591-08-2
Acrolein	2-Propenal	107-02-8
Acrylamide	2-Propenamide	79-06-1
Acrylonitrile	2-Propenenitrile	107-13-1

Appendix VIII Hazardous Constituents		
Common name	Chemical abstracts name (9/98)	CAS #
Aflatoxins	Same	1402-68-2
Aldicarb	Propanal, 2-methyl-2-(methylthio)-, O-[(methylamino)carbonyl]oxime	116-06-3
Aldicarb sulfone (5/96)	Propanal, 2-methyl-2-(methylsulfonyl), O-[(methylamino) carbonyl] oxime	1646-88-4
Aldrin	1,4,5,8-Dimethanonaphthalene, 1,2,3,4,10,10-10-hexachloro-1,4,4a,5,8,8a-hexahydro-, (1alpha,4alpha,4abeta,5alpha,8alpha, 8abeta)-	309-00-2
Allyl alcohol	2-Propen-1-ol	107-18-6
Allyl chloride	1-Propane, 3-chloro	107-05-1
Aluminum phosphide	Same	20859-73-8
4-Aminobiphenyl	[1,1'-Biphenyl]-4-amine	92-67-1
5-(Aminomethyl)-3-isoxazolol	3(2H)-Isoxazolone, 5-(aminomethyl)-	2763-96-4
4-Aminopyridine	4-Pyridinamine	504-24-5
Amitrole	1H-1,2,4-Triazol-3-amine	61-82-5
Ammonium vanadate	Vanadic acid, ammonium salt	7803-55-6
Aniline	Benzenamine	62-53-3
o-Anisidine (2-methoxyaniline)	Benzenamine, 2-Methoxy-	90-04-0
Antimony	Same	7440-36-0
Antimony compounds, N.O.S. ¹		
Aramite	Sulfurous acid, 2-chloroethyl 2-[4-(1,1-dimethylethyl)phenoxy]-1-methylethyl ester	140-57-8
Arsenic	Same	7440-38-2
Arsenic compounds, N.O.S. ¹		
Arsenic acid	Arsenic acid H ₃ AsO ₄	7778-39-4
Arsenic pentoxide	Arsenic oxide As ₂ O ₅	1303-28-2
Arsenic trioxide	Arsenic oxide As ₂ O ₃	1327-53-3
Auramine	Benzenamine, 4,4'-carbonimidoylbis[N,N-dimethyl	492-80-8
Azaserine	L-Serine, diazoacetate (ester)	115-02-6
Barban (5/96)	Carbamic acid, (3-chlorophenyl) -, 4-chloro-2-butynyl ester	101-27-9
Barium	Same	7440-39-3
Barium compounds, N.O.S. ¹		
Barium cyanide	Same	542-62-1
Bendiocarb (5/96)	1,3-Benzodioxol-4-ol, 2,2-dimethyl-, methyl carbamate	22781-23-3
Bendiocarb phenol (5/96)	1,3-Benzodioxol-4-ol, 2,2-dimethyl-,	22961-82-6
Benomyl (5/96)	Carbamic acid, [1- [(butylamino) carbonyl]- 1H-benzimidazol-2-yl] -, methyl ester	17804-35-2
Benz[c]acridine	Same	225-51-4
Benz[a]anthracene	Same	56-55-3
Benzal chloride	Benzene, (dichloromethyl)-	98-87-3
Benzene	Same	71-43-2
Benzeneearsonic acid	Arsonic acid, phenyl-	98-05-5
Benidine	[1,1'-Biphenyl]-4,4'-diamine	92-87-5
Benzo[b]fluoranthene	Benz[e]acephenanthrylene	205-99-2
Benzo[j]fluoranthene	Same	205-82-3
Benzo(k)fluoranthene (5/96)	Same	207-08-9
Benzo[a]pyrene	Same	50-32-8
p-Benzoquinone	2,5-Cyclohexadiene-1,4-dione	106-51-4
Benzotrichloride	Benzene, (trichloromethyl)-	98-07-7
Benzyl chloride	Benzene, (chloromethyl)-	100-44-7
Beryllium powder	Same	7440-41-7
Beryllium compounds, N.O.S. ¹		
Bis (pentamethylene)-thiuram tetrasulfide.	Piperidine, 1,1'-(tetrathiodicarbonothioyl)-bis-	120-54-7
Bromoacetone	2-Propanone, 1-bromo-	598-31-2
Bromoform	Methane, tribromo-	75-25-2
4-Bromophenyl phenyl ether	Benzene, 1-bromo-4-phenoxy-	101-55-3
Brucine	Strychnidin-10-one, 2,3-dimethoxy-	357-57-3
Butyl benzyl phthalate	1,2-Benzenedicarboxylic acid, butyl phenylmethyl ester	85-68-7
Butylate (5/96)	Carbamothioic acid, bis (2-methylpropyl)-, S-ethyl ester	2008-41-5
Cacodylic acid	Arsinic acid, dimethyl-	75-60-5
Cadmium	Same	7440-43-9
Cadmium compounds, N.O.S. ¹		
Calcium chromate	Chromic acid H ₂ CrO ₄ , calcium salt	13765-19-0
Calcium cyanide	Calcium cyanide Ca(CN) ₂	592-01-8
Carbaryl (5/96)	1-Naphthalenol, methylcarbamate	63-25-2
Carbendazim (5/96)	Carbamic acid, 1H-benzimidazol-2-yl, methyl ester	10605-21-7
Carbofuran (5/96)	7-Benzofuranol, 2,3-dihydro-2,2-dimethyl-, methylcarbamate	1563-66-2
Carbofuran phenol (9/96)	7-Benzofuranol, 2,3-dihydro-2,2-dimethyl-	1563-38-8

Appendix VIII Hazardous Constituents		
Common name	Chemical abstracts name (9/98)	CAS #
Carbon disulfide	Same	75-15-0
Carbon oxyfluoride	Carbonic difluoride	353-50-4
Carbon tetrachloride	Methane, tetrachloro-	56-23-5
Carbosulfan (6/96)	Carbamic acid, [(dibutylamino) thio] methyl-, 2,3-dihydro-2,2-dimethyl-7-benzofuranyl ester	55285-14-8
Chloral	Acetaldehyde, trichloro-	75-87-6
Chlorambucil	Benzenebutanoic acid, 4-[bis(2-chloroethyl)amino]-	305-03-3
Chlordane	4,7-Methano-1H-indene, 1,2,4,5,6,7,8,8-octachloro-2,3,3a,4,7,7a-hexahydro-	57-74-9
Chlordane (alpha and gamma isomers)		
Chlorinated benzenes, N.O.S. ¹		
Chlorinated ethane, N.O.S. ¹		
Chlorinated fluorocarbons, N.O.S. ¹		
Chlorinated naphthalene, N.O.S. ¹		
Chlorinated phenol, N.O.S. ¹		
Chlornaphazin	Naphthalenamine, N,N'-bis(2-chloroethyl)-	494-03-1
Chloroacetaldehyde	Acetaldehyde, chloro-	107-20-0
Chloroalkyl ethers, N.O.S. ¹		
p-Chloroaniline	Benzenamine, 4-chloro-	106-47-8
Chlorobenzene	Benzene, chloro-	108-90-7
Chlorobenzilate	Benzeneacetic acid, 4-chloro-alpha-(4-chlorophenyl)-alpha-hydroxy-, ethyl ester	510-15-6
p-Chloro-m-cresol	Phenol, 4-chloro-3-methyl-	59-50-7
2-Chloroethyl vinyl ether	Ethene, (2-chloroethoxy)-	110-75-8
Chloroform	Methane, trichloro-	67-66-3
Chloromethyl methyl ether	Methane, chloromethoxy-	107-30-2
beta-Chloronaphthalene	Naphthalene, 2-chloro-	91-58-7
o-Chlorophenol	Phenol, 2-chloro-	95-57-8
1-(o-Chlorophenyl)thiourea	Thiourea, (2-chlorophenyl)-	5344-82-1
Chloroprene	1,3-Butadiene, 2-chloro-	126-99-8
3-Chloropropionitrile	Propanenitrile, 3-chloro-	542-76-7
Chromium	Same	7440-47-3
Chromium compounds, N.O.S. ¹		
Chrysene	Same	218-01-9
Citrus red No. 2	2-Naphthalenol, 1-[(2,5-dimethoxyphenyl)azo]-	6358-53-8
Coal tar creosote	Same	8007-45-2
Copper cyanide	Copper cyanide CuCN	544-92-3
Copper dimethyldithiocarbamate	Copper, bis(dimethylcarbomodithioato-S,S')-, (6/96)	137-29-1
Creosote	Same	
p-Cresidine	2-Methoxy-5-methylbenzenamine	120-71-8
Cresol (Cresylic acid)	Phenol, methyl-	1319-77-3
Crotonaldehyde	2-Butenal	4170-30-3
m-Cumenyl methylcarbamate	Phenol, 3-(methylethyl)-, methyl carbamate (5/96)	64-00-6
Cyanides (soluble salts and complexes) N.O.S. ¹		
Cyanogen	Ethanedinitrile	460-19-5
Cyanogen bromide	Cyanogen bromide (CN)Br	506-68-3
Cyanogen chloride	Cyanogen chloride (CN)Cl	506-77-4
Cycasin	beta-D-Glucopyranoside, (methyl-ONN-azoxy)methyl	14901-08-7
Cycloate	Carbamothioic acid, cyclohexylethyl-, S-ethyl ester	1134-23-2
2-Cyclohexyl-4,6-dinitrophenol	Phenol, 2-cyclohexyl-4,6-dinitro-	131-89-5
Cyclophosphamide	2H-1,3,2-Oxazaphosphorin-2-amine, N,N-bis(2-chloroethyl)tetrahydro-, 2-oxide	50-18-0
2,4-D	Acetic acid, (2,4-dichlorophenoxy)-	94-75-7
2,4-D, salts, esters		
Daunomycin	5,12-Naphthacenedione, 8-acetyl-10-[(3-amino-2,3,6-trideoxy-alpha-L-lyxo-hexopyranosyl)oxy]-7,8,9,10-tetrahydro-6,8,11-trihydroxy-1-methoxy-, (8S-cis)-	20830-81-3
Dazomet (5/96)	2H-1,3,5-thiadiazine-2-thione,tetrahydro-3,5-dimethyl	533-74-4
DDD	Benzene, 1,1'-(2,2-dichloroethylidene)bis[4-chloro-	72-54-8
DDE	Benzene, 1,1'-(dichloroethenylidene)bis[4-chloro-	72-55-9
DDT	Benzene, 1,1'-(2,2,2-trichloroethylidene)bis[4-chloro-	50-29-3
Diallate	Carbamothioic acid, bis(1-methylethyl)-, S-(2,3-dichloro-2-propenyl) ester	2303-16-4
Dibenz[a,h]acridine	Same	226-36-8
Dibenz[a,j]acridine	Same	224-42-0

Appendix VIII Hazardous Constituents		
Common name	Chemical abstracts name (9/98)	CAS #
Dibenz[a,h]anthracene	Same	53-70-3
7H-Dibenzo[c,g]carbazole	Same	194-59-2
Dibenzo[a,e]pyrene	Naphtho[1,2,3,4-def]chrysene	192-65-4
Dibenzo[a,h]pyrene	Dibenzo[b,def]chrysene	189-64-0
Dibenzo[a,i]pyrene	Benzo[rs]t]pentaphene	189-55-9
1,2-Dibromo-3-chloropropane	Propane, 1,2-dibromo-3-chloro-	96-12-8
Dibutyl phthalate	1,2-Benzenedicarboxylic acid, dibutyl ester	84-74-2
o-Dichlorobenzene	Benzene, 1,2-dichloro-	95-50-1
m-Dichlorobenzene	Benzene, 1,3-dichloro-	541-73-1
p-Dichlorobenzene	Benzene, 1,4-dichloro-	106-46-7
Dichlorobenzene, N.O.S. ¹	Benzene, dichloro-	25321-22-6
3,3'-Dichlorobenzidine	[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dichloro-	91-94-1
1,4-Dichloro-2-butene	2-Butene, 1,4-dichloro-	764-41-0
Dichlorodifluoromethane	Methane, dichlorodifluoro-	75-71-8
Dichloroethylene, N.O.S. ¹	Dichloroethylene	25323-30-2
1,1-Dichloroethylene	Ethene, 1,1-dichloro-	75-35-4
1,2-Dichloroethylene	Ethene, 1,2-dichloro-, (E)-	156-60-5
Dichloroethyl ether	Ethane, 1,1'-oxybis[2-chloro-	111-44-4
Dichloroisopropyl ether	Propane, 2,2'-oxybis[2-chloro-	108-60-1
Dichloromethoxy ethane	Ethane, 1,1'-[methylenebis(oxy)]bis[2-chloro-	111-91-1
Dichloromethyl ether	Methane, oxybis[chloro-	542-88-1
2,4-Dichlorophenol	Phenol, 2,4-dichloro-	120-83-2
2,6-Dichlorophenol	Phenol, 2,6-dichloro-	87-65-0
Dichlorophenylarsine	Arsonous dichloride, phenyl-	696-28-6
Dichloropropane, N.O.S. ¹	Propane, dichloro-	26638-19-7
Dichloropropanol, N.O.S. ¹	Propanol, dichloro-	26545-73-3
Dichloropropene, N.O.S. ¹	1-Propene, dichloro-	26952-23-8
1,3-Dichloropropene	1-Propene, 1,3-dichloro-	542-75-6
Dieldrin	2,7:3,6-Dimethanonaphth[2,3-b]oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha,2beta,2aalpha,3beta,6beta, 6aalpha,7beta,7aalpha)-	60-57-1
1,2:3,4-Diepoxybutane	2,2'-Bioxirane	1464-53-5
Diethylarsine	Arsine, diethyl-	692-42-2
Diethylene glycol, dicarbamate (5/96)	Ethanol, 2,2'-oxybis-, dicarbamate	5952-26-1
1,4-Diethyleneoxide	1,4-Dioxane	123-91-1
Diethylhexyl phthalate	1,2-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester	117-81-7
N,N'-Diethylhydrazine	Hydrazine, 1,2-diethyl-	1615-80-1
O,O-Diethyl S-methyl dithiophosphate	Phosphorodithioic acid, O,O-diethyl S-methyl ester	3288-58-2
Diethyl-p-nitrophenyl phosphate	Phosphoric acid, diethyl 4-nitrophenyl ester	311-45-5
Diethyl phthalate	1,2-Benzenedicarboxylic acid, diethyl ester	84-66-2
O,O-Diethyl O-pyrazinyl phosphoro- thioate	Phosphorothioic acid, O,O-diethyl O-pyrazinyl ester	297-97-2
Diethylstilbesterol	Phenol, 4,4'-(1,2-diethyl-1,2-ethenediyl)bis-, (E)-	56-53-1
Dihydrosafrole	1,3-Benzodioxole, 5-propyl-	94-58-6
Diisopropylfluorophosphate (DFP)	Phosphorofluoridic acid, bis(1-methylethyl) ester	55-91-4
Dimethoate	Phosphorodithioic acid, O,O-dimethyl S-[2-(methylamino)-2-oxoethyl] ester	60-51-5
3,3'-Dimethoxybenzidine	[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethoxy-	119-90-4
p-Dimethylaminoazobenzene	Benzenamine, N,N-dimethyl-4-(phenylazo)-	60-11-7
2,4-Dimethylaniline (2,4-xylidine)	Benzenamine, 2,4-dimethyl-	95-68-1
7,12-Dimethylbenz[a]anthracene	Benz[a]anthracene, 7,12-dimethyl-	57-97-6
3,3'-Dimethylbenzidine	[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethyl-	119-93-7
Dimethylcarbamoyl chloride	Carbamic chloride, dimethyl-	79-44-7
1,1-Dimethylhydrazine	Hydrazine, 1,1-dimethyl-	57-14-7
1,2-Dimethylhydrazine	Hydrazine, 1,2-dimethyl-	540-73-8
alpha,alpha-Dimethylphenethylamine	Benzeneethanamine, alpha,alpha-dimethyl-	122-09-8
2,4-Dimethylphenol	Phenol, 2,4-dimethyl-	105-67-9
Dimethyl phthalate	1,2-Benzenedicarboxylic acid, dimethyl ester	131-11-3
Dimethyl sulfate	Sulfuric acid, dimethyl ester	77-78-1
Dimetilan (5/96)	Carbamic acid, dimethyl-, 1-[(dimethylamino) carbonyl]-5-methyl-1H-pyrazol-3-yl ester	644-64-4
Dinitrobenzene, N.O.S. ¹	Benzene, dinitro-	25154-54-5

Appendix VIII Hazardous Constituents		
Common name	Chemical abstracts name (9/98)	CAS #
4,6-Dinitro-o-cresol	Phenol, 2-methyl-4,6-dinitro-	534-52-1
4,6-Dinitro-o-cresol salts		
2,4-Dinitrophenol	Phenol, 2,4-dinitro-	51-28-5
2,4-Dinitrotoluene	Benzene, 1-methyl-2,4-dinitro-	121-14-2
2,6-Dinitrotoluene	Benzene, 2-methyl-1,3-dinitro-	606-20-2
Dinoseb	Phenol, 2-(1-methylpropyl)-4,6-dinitro-	88-85-7
Di-n-octyl phthalate	1,2-Benzenedicarboxylic acid, dioctyl ester	117-84-0
Diphenylamine	Benzenamine, N-phenyl-	122-39-4
1,2-Diphenylhydrazine	Hydrazine, 1,2-diphenyl-	122-66-7
Di-n-propylnitrosamine	1-Propanamine, N-nitroso-N-propyl-	621-64-7
Disulfiram (5/96)	Thioperoxydicarbonic diamide, tetraethyl	97-77-8
Disulfoton	Phosphorodithioic acid, O,O-diethyl S-[2-(ethylthio)ethyl] ester	298-04-4
Dithiobiuret	Thioimododicarbonic diamide [(H ₂ N)C(S)] ₂ NH	541-53-7
Endosulfan	6,9-Methano-2,4,3-benzodioxathiepin, 6,7,8,9,10,10-hexachloro-1,5,5a,6,9,9a- hexahydro-, 3-oxide	115-29-7
Endothall	7-Oxabicyclo[2.2.1]heptane-2,3-dicarboxylic acid	145-73-3
Endrin	2,7:3,6-Dimethanonaphth[2,3-b]oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha,2beta,2beta,3alpha,6alpha, 6beta,7beta,7aalpha)-	72-20-8
Endrin metabolites		
Epichlorohydrin	Oxirane, (chloromethyl)-	106-89-8
Epinephrine	1,2-Benzenediol, 4-[1-hydroxy-2-(methylamino)ethyl]-, (R)-	51-43-4
EPTC	Carbamothioic acid, dipropyl-, S-ethyl ester	759-94-4
Ethyl carbamate (urethane)	Carbamic acid, ethyl ester	51-79-6
Ethyl cyanide	Propanenitrile	107-12-0
Ethylenebisdithiocarbamic acid	Carbamodithioic acid, 1,2-ethanediybis-	111-54-6
Ethylenebisdithiocarbamic acid, salts and esters		
Ethylene dibromide	Ethane, 1,2-dibromo-	106-93-4
Ethylene dichloride	Ethane, 1,2-dichloro-	107-06-2
Ethylene glycol monoethyl ether	Ethanol, 2-ethoxy-	110-80-5
Ethyleneimine	Aziridine	151-56-4
Ethylene oxide	Oxirane	75-21-8
Ethylenethiourea	2-Imidazolidinethione	96-45-7
Ethylidene dichloride	Ethane, 1,1-dichloro-	75-34-3
Ethyl methacrylate	2-Propenoic acid, 2-methyl-, ethyl ester	97-63-2
Ethyl methanesulfonate	Methanesulfonic acid, ethyl ester	62-50-0
Ethyl Ziram (5/96)	Zinc, bis(diethylcarbamodithioato-S,S')-	14324-55-1
Famphur	Phosphorothioic acid, O-[4-[(dimethylamino)sulfonyl]phenyl] O,O-dimethyl ester	52-85-7
Ferbam (5/96)	Iron, tris(dimethylcarbamodithioato-S,S')-,	14484-64-1
Fluoranthene	Same	206-44-0
Fluorine	Same	7782-41-4
Fluoroacetamide	Acetamide, 2-fluoro-	640-19-7
Fluoroacetic acid, sodium salt	Acetic acid, fluoro-, sodium salt	62-74-8
Formaldehyde	Same	50-00-0
Formetanate hydrochloride	Methanimidamide, N,N-dimethyl-N'-[3-[(methylamino) carbonyl]oxy]phenyl]-, monohydrochloride (5/96)	23422-53-9
Formic acid	Same	64-18-6
Formparanate (5/96)	Methanimidamide, N,N-dimethyl-N'-[2-methyl-4-[(methylamino) carbonyl]oxy]phenyl]-.	17702-57-7
Glycidylaldehyde	Oxiranecarboxyaldehyde	765-34-4
Halomethanes, N.O.S. ¹		
Heptachlor	4,7-Methano-1H-indene, 1,4,5,6,7,8,8-heptachloro-3a,4,7,7a-tetrahydro-	76-44-8
Heptachlor epoxide	2,5-Methano-2H-indeno[1,2-b]oxirene, 2,3,4,5,6,7,7-heptachloro-1a,1b,5,5a,6,6a-hexahydro-, (1aalpha,1bbeta,2alpha,5alpha, 5abeta,6beta,6aalpha)-	1024-57-3
Heptachlor epoxide (alpha, beta, and gamma isomers)		
Heptachlorodibenzofurans	(5/96)	
Heptachlorodibenzo-p-dioxins	(5/96)	
Hexachlorobenzene	Benzene, hexachloro-	118-74-1
Hexachlorobutadiene	1,3-Butadiene, 1,1,2,3,4,4-hexachloro-	87-68-3
Hexachlorocyclopentadiene	1,3-Cyclopentadiene, 1,2,3,4,5,5-hexachloro-	77-47-4
Hexachlorodibenzo-p-dioxins		
Hexachlorodibenzofurans		
Hexachloroethane	Ethane, hexachloro-	67-72-1
Hexachlorophene	Phenol, 2,2'-methylenebis[3,4,6-trichloro-	70-30-4

Appendix VIII Hazardous Constituents		
Common name	Chemical abstracts name (9/98)	CAS #
Hexachloropropene	1-Propene, 1,1,2,3,3,3-hexachloro-	1888-71-7
Hexaethyl tetraphosphate	Tetraphosphoric acid, hexaethyl ester	757-58-4
Hydrazine	Same	302-01-2
Hydrogen cyanide	Hydrocyanic acid	74-90-8
Hydrogen fluoride	Hydrofluoric acid	7664-39-3
Hydrogen sulfide	Hydrogen sulfide H ₂ S	7783-06-4
Indeno[1,2,3-cd]pyrene	Same	193-39-5
3-Iodo-2-propynyl n-butylcarbamate (5/96)	Carbamic acid, butyl-, 3-iodo-2-propynyl ester	55406-53-6
Isobutyl alcohol	1-Propanol, 2-methyl-	78-83-1
Isodrin	1,4,5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a-hexahydro-, (1alpha,4alpha,4abeta,5beta,8beta,-8abeta) -	465-73-6
Isolan (5/96)	Carbamic acid, dimethyl-, 3-methyl-1-(1-methylethyl)-1H-pyrazol-5-yl ester	119-38-0
Isosafrole	1,3-Benzodioxole, 5-(1-propenyl)-	120-58-1
Kepone	1,3,4-Metheno-2H-cyclobuta[cd]pentalen-2-one, 1,1a,3,3a,4,5,5a,5b,6-decachlorooctahydro-	143-50-0
Lasiocarpine	2-Butenoic acid, 2-methyl-, 7-[[2,3-dihydroxy-2-(1-methoxyethyl)-3-methyl-1-oxobutoxy]methyl]-2,3,5,7a-tetrahydro-1H-pyrrolizin-1-yl ester, [1S-[1alpha(Z),7(2S*,3R*),7aalpha]]-	303-34-4
Lead	Same	7439-92-1
Lead compounds, N.O.S. ¹		
Lead acetate	Acetic acid, lead(2+) salt	301-04-2
Lead phosphate	Phosphoric acid, lead(2+) salt (2:3)	7446-27-7
Lead subacetate	Lead, bis(acetato-O)tetrahydroxytri-	1335-32-6
Lindane	Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1alpha,2alpha,3beta,4alpha,5alpha,6beta)-	58-89-9
Maleic anhydride	2,5-Furandione	108-31-6
Maleic hydrazide	3,6-Pyridazinedione, 1,2-dihydro-	123-33-1
Malononitrile	Propanedinitrile	109-77-3
Manganese dimethyldithiocarbamate (5/96)	Manganese, bis(dimethylcarbamdithioato-S,S')-,	15339-36-3
Melphalan	L-Phenylalanine, 4-[bis(2-chloroethyl)aminol]-	148-82-3
Mercury	Same	7439-97-6
Mercury compounds, N.O.S. ¹		
Mercury fulminate	Fulminic acid, mercury(2+) salt	628-86-4
Metam Sodium (5/96)	Carbamodithioic acid, methyl-, monosodium salt	137-42-8
Methacrylonitrile	2-Propenenitrile, 2-methyl-	126-98-7
Methapyrilene	1,2-Ethanediamine, N,N-dimethyl-N'-2-pyridinyl-N'-(2-thienylmethyl)-	91-80-5
Methiocarb (5/96)	Phenol, (3,5-dimethyl-4-(methylthio)-, methylcarbamate	2032-65-7
Methomyl	Ethanimidothioic acid, N-[[[(methylamino)carbonyl]oxy]-, methyl ester	16752-77-5
Methoxychlor	Benzene, 1,1'-(2,2,2-trichloroethylidene)bis[4-methoxy-	72-43-5
Methyl bromide	Methane, bromo-	74-83-9
Methyl chloride	Methane, chloro-	74-87-3
Methyl chlorocarbonate	Carbonochloridic acid, methyl ester	79-22-1
Methyl chloroform	Ethane, 1,1,1-trichloro-	71-55-6
3-Methylcholanthrene	Benz[j]aceanthrylene, 1,2-dihydro-3-methyl-	56-49-5
4,4'-Methylenebis (2-chloroaniline)	Benzenamine, 4,4'-methylenebis[2-chloro-	101-14-4
Methylene bromide	Methane, dibromo-	74-95-3
Methylene chloride	Methane, dichloro-	75-09-2
Methyl ethyl ketone (MEK)	2-Butanone	78-93-3
Methyl ethyl ketone peroxide	2-Butanone, peroxide	1338-23-4
Methyl hydrazine	Hydrazine, methyl-	60-34-4
Methyl iodide	Methane, iodo-	74-88-4
Methyl isocyanate	Methane, isocyanato-	624-83-9
2-Methylactonitrile	Propanenitrile, 2-hydroxy-2-methyl-	75-86-5
Methyl methacrylate	2-Propenoic acid, 2-methyl-, methyl ester	80-62-6
Methyl methanesulfonate	Methanesulfonic acid, methyl ester	66-27-3
Methyl parathion	Phosphorothioic acid, O,O-dimethyl O-(4-nitrophenyl) ester	298-00-0
Methylthiouracil	4(1H)-Pyrimidinone, 2,3-dihydro-6-methyl-2-thioxo-	56-04-2
Metolcarb (5/96)	Carbamic acid, methyl-, 3-methylphenyl ester	1129-41-5
Mexacarbate (5/96)	Phenol, 4-(dimethylamino)-3,5-dimethyl-, methylcarbamate (ester)	315-18-4
Mitomycin C	Azirino[2',3':3,4]pyrrolo[1,2-a]indole-4,7-dione, 6-amino-8-[[[(aminocarbonyl)oxy]methyl]-1,1a,2,8,8a,8b-hexahydro-8a-methoxy-5- methyl-, [1aS-(1alpha,8beta,8aalpha,8balpha)]-]	50-07-7
MNNG	Guanidine, N-methyl-N'-nitro-N-nitroso-	70-25-7

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Common name	Chemical abstracts name (9/98)	CAS #
Molinate (5/96)	1H-Azepine-1-carbothioic acid, hexahydro-, S-ethyl ester	2212-67-1
Mustard gas	Ethane, 1,1'-thiobis[2-chloro-	505-60-2
Naphthalene	Same	91-20-3
1,4-Naphthoquinone	1,4-Naphthalenedione	130-15-4
alpha-Naphthylamine	1-Naphthalenamine	134-32-7
beta-Naphthylamine	2-Naphthalenamine	91-59-8
alpha-Naphthylthiourea	Thiourea, 1-naphthalenyl-	86-88-4
Nickel	Same	7440-02-0
Nickel compounds, N.O.S. ¹		
Nickel carbonyl	Nickel carbonyl Ni(CO) ₄ , (T-4)-	13463-39-3
Nickel cyanide	Nickel cyanide Ni(CN) ₂	557-19-7
Nicotine	Pyridine, 3-(1-methyl-2-pyrrolidinyl)-, (S)-	54-11-5
Nicotine salts		
Nitric oxide	Nitrogen oxide NO	10102-43-9
p-Nitroaniline	Benzenamine, 4-nitro-	100-01-6
Nitrobenzene	Benzene, nitro-	98-95-3
Nitrogen dioxide	Nitrogen oxide NO ₂	10102-44-0
Nitrogen mustard	Ethanamine, 2-chloro-N-(2-chloroethyl)-N-methyl-	51-75-2
Nitrogen mustard, hydrochloride salt		
Nitrogen mustard N-oxide	Ethanamine, 2-chloro-N-(2-chloroethyl)-N-methyl-, N-oxide	126-85-2
Nitrogen mustard, N-oxide, hydrochloride salt		
Nitroglycerin	1,2,3-Propanetriol, trinitrate	55-63-0
p-Nitrophenol	Phenol, 4-nitro-	100-02-7
2-Nitropropane	Propane, 2-nitro-	79-46-9
Nitrosamines, N.O.S. ¹		35576-91-1
N-Nitrosodi-n-butylamine	1-Butanamine, N-butyl-N-nitroso-	924-16-3
N-Nitrosodiethanolamine	Ethanol, 2,2'-(nitrosoimino)bis-	1116-54-7
N-Nitrosodiethylamine	Ethanamine, N-ethyl-N-nitroso-	55-18-5
N-Nitrosodimethylamine	Methanamine, N-methyl-N-nitroso-	62-75-9
N-Nitroso-N-ethylurea	Urea, N-ethyl-N-nitroso-	759-73-9
N-Nitrosomethylethylamine	Ethanamine, N-methyl-N-nitroso-	10595-95-6
N-Nitroso-N-methylurea	Urea, N-methyl-N-nitroso-	684-93-5
N-Nitroso-N-methylurethane	Carbamic acid, methylnitroso-, ethyl ester	615-53-2
N-Nitrosomethylvinylamine	Vinylamine, N-methyl-N-nitroso-	4549-40-0
N-Nitrosomorpholine	Morpholine, 4-nitroso-	59-89-2
N-Nitrosornicotine	Pyridine, 3-(1-nitroso-2-pyrrolidinyl)-, (S)-	16543-55-8
N-Nitrosopiperidine	Piperidine, 1-nitroso-	100-75-4
N-Nitrosopyrrolidine	Pyrrolidine, 1-nitroso-	930-55-2
N-Nitrososarcosine	Glycine, N-methyl-N-nitroso-	13256-22-9
5-Nitro-o-toluidine	Benzenamine, 2-methyl-5-nitro-	99-55-8
Octachlorodibenzo-p-dioxin (OCDD)	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (7/02)	
Octachlorodibenzofuran(OCDF)	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (7/02)	
Octamethylpyrophosphoramide	Diphosphoramidate, octamethyl-	152-16-9
Osmium tetroxide	Osmium oxide OsO ₄ , (T-4)-	20816-12-0
Oxamyl (5/96)	Ethanimidothioic acid, 2-(dimethylamino)-N-[(methylamino)carbonyl]oxy]-2-oxo-, methyl ester	23135-22-0
Paraldehyde	1,3,5-Trioxane, 2,4,6-trimethyl-	123-63-7
Parathion	Phosphorothioic acid, O,O-diethyl O-(4-nitrophenyl) ester	56-38-2
Pebulate	Carbamothioic acid, butylethyl-, S-propyl ester	1114-71-2
Pentachlorobenzene	Benzene, pentachloro-	608-93-5
Pentachlorodibenzo-p-dioxins		
Pentachlorodibenzofurans		
Pentachloroethane	Ethane, pentachloro-	76-01-7
Pentachloronitrobenzene (PCNB)	Benzene, pentachloronitro-	82-68-8
Pentachlorophenol	Phenol, pentachloro-	87-86-5
Phenacetin	Acetamide, N-(4-ethoxyphenyl)-	62-44-2
Phenol	Same	108-95-2
1,2-Phenylenediamine	1,2-Benzenediamine	95-54-5
1,3-Phenylenediamine	1,3-Benzenediamine	108-45-2
Phenylenediamine	Benzenediamine	25265-76-3

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Common name	Chemical abstracts name (9/98)	CAS #
Phenylmercury acetate	Mercury, (acetato-O)phenyl-	62-38-4
Phenylthiourea	Thiourea, phenyl-	103-85-5
Phosgene	Carbonic dichloride	75-44-5
Phosphine	Same	7803-51-2
Phorate	Phosphorodithioic acid, O,O-diethyl S-[(ethylthio)methyl] ester	298-02-2
Phthalic acid esters, N.O.S. ¹		
Phthalic anhydride	1,3-Isobenzofurandione	85-44-9
Physostigmine (5/96)	Pyrrolo[2,3-b]indol-5-01, 1,2,3,3a,8,8a-hexahydro-1,3a,8-trimethyl-, methylcarbamate (ester), (3aS-cis)-	57-47-6
Physostigmine salicylate (5/96)	Benzoic acid, 2-hydroxy-, compd. with (3aS-cis)-1,2,3,3a,8,8a-hexahydro-1,3a,8-trimethylpyrrolo [2,3-b]indol-5-yl methylcarbamate ester (1:1).	57-64-7
2-Picoline	Pyridine, 2-methyl-	109-06-8
Polychlorinated biphenyls, N.O.S. ¹		
Potassium cyanide	Potassium cyanide K(CN)	151-50-8
Potassium dimethyldithiocarbamate (5/96)	Carbamodithioc acid, dimethyl, potassium salt	128-03-0
Potassium n-hydroxymethyl-n-methyl-dithiocarbamate	Carbamodithioic acid, (hydroxymethyl)methyl-, monopotassium salt	51026-28-9
Potassium n-methyldithiocarbamate (5/96)	Carbamodithioc acid, methyl-monopotassium salt	137-41-7
Potassium pentachlorophenate	Pentachlorophenol, potassium salt	7778736
Potassium silver cyanide	Argentate(1-), bis(cyano-C)-, potassium	506-61-6
Promecarb (5/96)	Phenol, 3-methyl-5-(1-methylethyl)-, methyl carbamate	2631-37-0
Pronamide	Benzamide, 3,5-dichloro-N-(1,1-dimethyl-2-propynyl)-	23950-58-5
1,3-Propane sultone	1,2-Oxathiolane, 2,2-dioxide	1120-71-4
n-Propylamine	1-Propanamine	107-10-8
Propargyl alcohol	2-Propyn-1-ol	107-19-7
Propham	Carbamic acid, phenyl-, 1-methylethyl ester	122-42-9
Propoxur	Phenol, 2-(1-methylethoxy)-, methylcarbamate	114-26-1
Propylene dichloride	Propane, 1,2-dichloro-	78-87-5
1,2-Propylenimine	Aziridine, 2-methyl-	75-55-8
Propylthiouracil	4(1H)-Pyrimidinone, 2,3-dihydro-6-propyl-2-thioxo-	51-52-5
Prosulfocarb	Carbamothioic acid, dipropyl-, S-(phenylmethyl) ester	52888-80-9
Pyridine	Same	110-86-1
Reserpine	Yohimban-16-carboxylic acid, 11,17-dimethoxy-18-[(3,4,5-trimethoxybenzoyl)oxy]-smethyl ester, (3beta,16beta,17alpha,18beta,20alpha)-	50-55-5
Resorcinol	1,3-Benzenediol	108-46-3
Saccharin	1,2-Benzisothiazol-3(2H)-one, 1,1-dioxide	81-07-2
Saccharin salts		
Safrole	1,3-Benzodioxole, 5-(2-propenyl)-	94-59-7
Selenium	Same	7782-49-2
Selenium compounds, N.O.S. ¹		
Selenium dioxide	Selenious acid	7783-00-8
Selenium sulfide	Selenium sulfide SeS ₂	7488-56-4
Selenium, tetrakis (dimethyl-dithiocarbamate.	Carbamodithioic acid, dimethyl-, tetraanhydrosulfide with orthothioselenious acid.	144-34-3
Selenourea	Same	630-10-4
Silver	Same	7440-22-4
Silver compounds, N.O.S. ¹		
Silver cyanide	Silver cyanide Ag(CN)	506-64-9
Silvex (2,4,5-TP)	Propanoic acid, 2-(2,4,5-trichlorophenoxy)-	93-72-1
Sodium cyanide	Sodium cyanide Na(CN)	143-33-9
Sodium dibutyldithiocarbamate	Carbamodithioic acid, dibutyl, sodium salt (5/96)	136-30-1
Sodium diethyldithiocarbamate	Carbamodithioic acid, diethyl-, sodium salt (5/96)	148-18-5
Sodium dimethyldithiocarbamate	Carbamodithioic acid, dimethyl-, sodium salt (5/96)	128-04-1
Sodium pentachlorophenate	Pentachlorophenol, sodium salt	131522
Streptozotocin	D-Glucose, 2-deoxy-2-[(methylnitrosoamino)carbonyl]amino]-	18883-66-4
Strychnine	Strychnidin-10-one	57-24-9
Strychnine salts		
Sulfallate (5/96)	Carbamodithioic acid, diethyl-, 2-chloro-2-propenyl ester	95-06-7
TCDD	Dibenzo[b,e][1,4]dioxin, 2,3,7,8-tetrachloro-	1746-01-6
Tetrabutylthiuram disulfide	Thioperoxydicarbonic diamide, tetrabutyl (5/96)	1634-02-2

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Common name	Chemical abstracts name (9/98)	CAS #
1,2,4,5-Tetrachlorobenzene	Benzene, 1,2,4,5-tetrachloro-	95-94-3
Tetrachlorodibenzo-p-dioxins		
Tetrachlorodibenzofurans		
Tetrachloroethane, N.O.S. ¹	Ethane, tetrachloro-, N.O.S.	25322-20-7
1,1,1,2-Tetrachloroethane	Ethane, 1,1,1,2-tetrachloro-	630-20-6
1,1,2,2-Tetrachloroethane	Ethane, 1,1,2,2-tetrachloro-	79-34-5
Tetrachloroethylene	Ethene, tetrachloro-	127-18-4
2,3,4,6-Tetrachlorophenol	Phenol, 2,3,4,6-tetrachloro-	58-90-2
2,3,4,6-tetrachlorophenol, potassium salt	same	53535276
2,3,4,6-tetrachlorophenol, sodium salt	same	25567559
Tetraethyldithiopyrophos-phate	Thiodiphosphoric acid, tetraethyl ester	3689-24-5
Tetraethyl lead	Plumbane, tetraethyl-	78-00-2
Tetraethyl pyrophosphate	Diphosphoric acid, tetraethyl ester	107-49-3
Tetramethylthiuram monosulfide	Bis(dimethylthiocarbamoyl) sulfide	97-74-5
Tetranitromethane	Methane, tetranitro-	509-14-8
Thallium	Same	7440-28-0
Thallium compounds, N.O.S. ¹		
Thallic oxide	Thallium oxide Tl ₂ O ₃	1314-32-5
Thallium(I) acetate	Acetic acid, thallium(1+) salt	563-68-8
Thallium(I) carbonate	Carbonic acid, dithallium(1+) salt	6533-73-9
Thallium(I) chloride	Thallium chloride TlCl	7791-12-0
Thallium(I) nitrate	Nitric acid, thallium(1+) salt	10102-45-1
Thallium selenite	Selenious acid, dithallium(1+) salt	12039-52-0
Thallium(I) sulfate	Sulfuric acid, dithallium(1+) salt	7446-18-6
Thioacetamide	Ethanethioamide	62-55-5
Thiodicarb (5/96)	Ethanimidothioic acid, N,N'-[thiobis [(methylimino) carbonyloxy]] bis-, dimethyl ester.	59669-26-0
Thiofanox	2-Butanone, 3,3-dimethyl-1-(methylthio)-, 0-[(methylamino)carbonyl] oxime	39196-18-4
Thiomethanol	Methanethiol	74-93-1
Thiophanate-methyl	Carbamic acid, [1,2-phenylenebis (iminocarbonothioyl)] bis-, dimethyl ester	23564-05-8
Thiophenol	Benzenethiol	108-98-5
Thiosemicarbazide	Hydrazinecarbothioamide	79-19-6
Thiourea	Same	62-56-6
Thiram	Thioperoxydicarbonic diamide [(H ₂ N)C(S)] ₂ S ₂ , tetramethyl-	137-26-8
Tirpate (5/96)	1,3-Dithiolane-2-carboxaldehyde, 2,4-dimethyl-, O-[(methylamino) carbonyl] oxime.	26419-73-8
Toluene	Benzene, methyl-	108-88-3
Toluenediamine	Benzenediamine, ar-methyl-	25376-45-8
Toluene-2,4-diamine	1,3-Benzenediamine, 4-methyl-	95-80-7
Toluene-2,6-diamine	1,3-Benzenediamine, 2-methyl-	823-40-5
Toluene-3,4-diamine	1,2-Benzenediamine, 4-methyl-	496-72-0
Toluene diisocyanate	Benzene, 1,3-diisocyanatomethyl-	26471-62-5
o-Toluidine	Benzenamine, 2-methyl-	95-53-4
o-Toluidine hydrochloride	Benzenamine, 2-methyl-, hydrochloride	636-21-5
p-Toluidine	Benzenamine, 4-methyl-	106-49-0
Toxaphene	Same	8001-35-2
Triallate (5/96)	Carbamothioic acid, bis(1-methylethyl)-, S-(2,3,3-trichloro-2-propenyl) ester	2303-17-5
2,4,6-Tribromophenol. (11/99)	Tribromophenol., 2,4,6-	118-79-6
Tributyltin	Tributylstannane (6/02)	688-73-3
Tributyltin Oxide	Bis(tri-n-butyltin) Oxide (6/02)	56-35-9
Tributyltin Chloride	Tributylchlorostannane (6/02)	1461-22-9
Tributyltin Hydroxide	Tributylhydroxystannane (6/02)	1067-97-6
Tributyltin Bromide	Tributylbromostannane (6/02)	1461-23-0
Tributyltin Acetate	(acetyloxy)tributylstannane (6/02)	56-36-0
Tributyltin Fluoride	Tributylfluorostannane (6/02)	1983-23-0
Triethyltin	Triethylstannane (6/02)	997-50-2
Triethyltin Chloride	Triethyltin Chloride (6/02)	994-31-0
1,2,4-Trichlorobenzene	Benzene, 1,2,4-trichloro-	120-82-1
1,1,2-Trichloroethane	Ethane, 1,1,2-trichloro-	79-00-5
Trichloroethylene	Ethene, trichloro-	79-01-6
Trichloromethanethiol	Methanethiol, trichloro-	75-70-7
Trichloromonofluoromethane	Methane, trichlorofluoro-	75-69-4
2,4,5-Trichlorophenol	Phenol, 2,4,5-trichloro-	95-95-4

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Common name	Chemical abstracts name (9/98)	CAS #
2,4,6-Trichlorophenol	Phenol, 2,4,6-trichloro-	88-06-2
2,4,5-T	Acetic acid, (2,4,5-trichlorophenoxy)-	93-76-5
Trichloropropane, N.O.S. ¹		25735-29-9
1,2,3-Trichloropropane	Propane, 1,2,3-trichloro-	96-18-4
Triethylamine (5/96)	Ethanamine, N,N-diethyl-	121-44-8
O,O,O-Triethyl phosphorothioate	Phosphorothioic acid, O,O,O-triethyl ester	126-68-1
1,3,5-Trinitrobenzene	Benzene, 1,3,5-trinitro-	99-35-4
Tris(1-aziridinyl)phosphine sulfide	Aziridine, 1,1',1''-phosphinothioylidynetris-	52-24-4
Tris(2,3-dibromopropyl) phosphate	1-Propanol, 2,3-dibromo-, phosphate (3:1)	126-72-7
Trypan blue	2,7-Naphthalenedisulfonic acid, 3,3'-[(3,3'-dimethyl[1,1'-biphenyl]-4,4'diyl)bis(azo)]-bis[5-amino-4-hydroxy-, tetrasodium salt	72-57-1
Uracil mustard	2,4-(1H,3H)-Pyrimidinedione, 5-[bis(2-chloroethyl)amino]-	66-75-1
Vanadium pentoxide	Vanadium oxide V ₂ O ₅	1314-62-1
Vernolate (5/96)	Carbamothioic acid, dipropyl-, S-propyl ester	1929-77-7
Vinyl chloride	Ethene, chloro-	75-01-4
Warfarin	2H-1-Benzopyran-2-one, 4-hydroxy-3-(3-oxo-1-phenylbutyl)-, when present at concentrations less than 0.3%	81-81-2
Warfarin	2H-1-Benzopyran-2-one, 4-hydroxy-3-(3-oxo-1-phenylbutyl)-, when present at concentrations greater than 0.3%	81-81-2
Warfarin salts, when present at concentrations less than 0.3%		
Warfarin salts, when present at concentrations greater than 0.3%		
Zinc cyanide	Zinc cyanide Zn(CN) ₂	557-21-1
Zinc phosphide	Zinc phosphide Zn ₃ P ₂ , when present at concentrations greater than 10%	1314-84-7
Zinc phosphide	Zinc phosphide Zn ₃ P ₂ , when present at concentrations of 10% or less	1314-84-7
Ziram	Zinc, bis(dimethylcarbamodithioato-S,S')-, (T-4)-	137-30-4

¹The abbreviation N.O.S. (not otherwise specified) signifies those members of the general class not specifically listed by name in this appendix.

Appendix IX Wastes Excluded under 260.20 & 260.22 - See 40 CFR 261. Appendix IX July 1, 2004, as amended.

Appendix X [Reserved 12/93]

Appendix XI Other Designated Waste

Hazardous Waste #	Substance (6/89, 6/95)
5555	Any solid waste the Department determines constitutes a hazard and requires greater control
7777	Non-hazardous waste received by a hazardous waste facility